



हिंदुस्तान ऑर्गेनिक केमिकल्स लिमिटेड  
HINDUSTAN ORGANIC CHEMICALS LIMITED  
(भारत सरकार का एक उद्यम)  
(A Government of India Enterprise)  
अम्बालामुगल, एर्नाकुलम जिला, पिन - 682 302 ।  
फ़ोन: (0484) 2720911, फ़ैक्स नंबर (0484) 2720893  
AMBALAMUGAL, Ernakulam District, PIN – 682 302.  
Phone: (0484) 2720911, FAX No. (0484) 2720893

**ई-निविदा सूचना**  
**E- TENDER NOTICE**

**एक-बोली प्रणाली** के तहत ई-बोली आमंत्रित की निम्नलिखित कार्य के लिए :

HOCL Invites e-Bids under the **Single-bid system** for the following work:

क्रम संख्या Sl. No.	वस्तु का विवरण और निविदा संख्या Description of Item and Tender No.
1	<b>कूलिंग टावर 1 में CPVC लाइन की आपूर्ति और बिछाना: CIV10255/2025</b> <b>SUPPLY AND LAYING OF CPVC LINES IN COOLING TOWER - 1</b> <b>HOCL Tender Ref: CIV10255/2025</b>

निविदा दस्तावेज [www.hoclkochi.com](http://www.hoclkochi.com) या [www.eprocure.gov.in](http://www.eprocure.gov.in) से डाउनलोड किए जा सकते हैं।

Tender documents may be downloaded from [www.hoclkochi.com](http://www.hoclkochi.com) or [www.eprocure.gov.in](http://www.eprocure.gov.in).

निविदा में भाग लेने के लिए कृपया एनआईसी ई-प्रोक्योरमेंट पोर्टल (यूआरएल: <https://eprocure.gov.in/eprocure/app> .) पर पंजीकरण करा **सकती हैं।** निर्दिष्ट ऑनलाइन प्रक्रिया के अलावा किसी अन्य माध्यम से प्रस्तुत निविदाएँ स्वीकार नहीं की जाएँगी। कृपया प्रस्ताव प्रस्तुत करने से पहले किसी भी परिशिष्ट/शुद्धिपत्र/विस्तार के लिए उपरोक्त साइटों को नियमित रूप से देखें।

Interested parties may please get registered with NIC e-procurement portal (URL: <https://eprocure.gov.in/eprocure/app>.) to participate in the tender. Tenders submitted other than through online procedure specified will not be accepted. Please visit the above sites regularly for any addendum/ corrigendum/ extension before submitting the offers.

विनिर्देशों और नियमों व शर्तों की पुष्टि करते हुए **एक-बोली प्रणाली** के तहत अपनी ई-बोली प्रस्तुत करें।

Please submit your E-bids under the **Single-bid system** confirming to the specifications and the terms and conditions.

ईएमडी -शून्य

निविदा का विवरण संलग्न सूची में दर्शाया गया है।

EMD - Nil

The details of the tender are as shown in INDEX enclosed.

हिंदुस्तान ऑर्गेनिक केमिकल्स लिमिटेड की ओर से  
For and on behalf of HINDUSTAN ORGANIC CHEMICALS LIMITED  
(जीएसटीएन: 32AAACH2663P1ZG)  
(सीआईएन: I99999MN1960GOI011895)

अजीत एम. दिवाकरन | AJIT M. DIVAKARAN

मुख्य अभियंता (यांत्रिक/यूटीवाइ/सिविल) | CHIEF ENGINEER (MECHANICAL/UTY/CIVIL)



हिंदुस्तान ऑर्गेनिक केमिकल्स लिमिटेड  
HINDUSTAN ORGANIC CHEMICALS LIMITED  
(भारत सरकार का एक उद्यम)  
(A Government of India Enterprise)

अम्बालामुगल, एर्नाकुलम जिला, पिन - 682 302 ।  
फ़ोन: (0484) 2720911, फ़ैक्स नंबर (0484) 2720893  
AMBALAMUGAL, Ernakulam District, PIN – 682 302.  
Phone: (0484) 2720911, FAX No. (0484) 2720893

**कूलिंग टावर 1 में CPVC लाइन की आपूर्ति और बिछाना**  
**SUPPLY AND LAYING OF CPVC LINES IN COOLING TOWER - 1**

**एचओसीएल निविदा संदर्भ: CIV10255/2025**  
**HOCL Tender Ref: CIV10255/2025**

प्रिय महोदय/Dear Sir,

हिंदुस्तान ऑर्गेनिक केमिकल्स लिमिटेड, भारत सरकार का एक उपक्रम है जो कोच्चि, केरल स्थित अपने संयंत्र में फिनोल, एसीटोन और हाइड्रोजन परोक्साइड का उत्पादन करता है। HOCL निम्नलिखित के लिए ई-निविदाएँ आमंत्रित करता है: **कूलिंग टावर 1 में CPVC लाइन की आपूर्ति और बिछाना**

Hindustan Organic Chemicals Limited is a Government of India Undertaking manufacturing Phenol, Acetone & Hydrogen Peroxide at its plant at Kochi, Kerala, India. HOCL invites e-tenders for **SUPPLY AND LAYING OF CPVC LINES IN COOLING TOWER - 1**

HOCL ने मेसर्स NIC के साथ उनके पोर्टल <https://eprocure.gov.in/eprocure/app> के माध्यम से ई-प्रोक्योरमेंट के लिए एक समझौता किया है। कृपया इस निविदा में भाग लेने के लिए NIC के साथ विक्रेता के रूप में पंजीकरण कराएँ।  
HOCL has entered into an agreement with M/s. NIC for e-procurement through their portal <https://eprocure.gov.in/eprocure/app>. You may please get registered as a vendor with NIC for participating in this tender.

निविदा दस्तावेज HOCL वेबसाइट [www.hoclkochi.com](http://www.hoclkochi.com) और <https://eprocure.gov.in/eprocure/app> पर अपलोड किए गए हैं  
Tender documents are uploaded in HOCL website [www.hoclkochi.com](http://www.hoclkochi.com) & <https://eprocure.gov.in/eprocure/app>

**संलग्न दस्तावेजों की सूची संलग्न है। आपसे अनुरोध है कि कृपया अपनी निविदा तैयार/जमा करने से पहले सभी दस्तावेजों का विस्तार से अध्ययन कर लें।**

**Index of documents enclosed is attached herewith. You are requested to kindly go through all the documents in detail before preparing/submitting your tender.**

निर्धारित तिथि और समय से पहले **एक-बोली प्रणाली** पर अपना प्रस्ताव ऑनलाइन प्रस्तुत कर सकते हैं।  
You may submit your offer on **Single-bid system** online before the due date and time specified.

धन्यवाद/Thanking you,

आपका विश्वासी/Yours Faithfully,  
हिंदुस्तान ऑर्गेनिक केमिकल्स लिमिटेड के लिए,  
For Hindustan Organic Chemicals Limited,

अजीत एम. दिवाकरन | AJIT M. DIVAKARAN  
मुख्य अभियंता (यांत्रिक/यूटीवाई/सिविल) | CHIEF ENGINEER (MECHANICAL/UTY/CIVIL)

**अनुक्रमणिका**  
**INDEX**

**कूलिंग टावर 1 में CPVC लाइन की आपूर्ति और बिछाना**  
**TENDER NOTICE FOR SUPPLY AND LAYING OF CPVC LINES IN COOLING TOWER - 1**

1	ऑनलाइन बोली प्रस्तुत करने के लिए सामान्य निर्देश GENERAL INSTRUCTIONS FOR ONLINE BID SUBMISSION	अनुलग्नक-I ANNEXURE-I
2	पूर्व-योग्यता मानदंडों के साथ निविदा के सामान्य नियम और शर्तें GENERAL TERMS AND CONDITIONS OF THE TENDER WITH PRE-QUALIFICATION CRITERIA	अनुलग्नक-II ANNEXURE-II
3	काम की गुंजाइश SCOPE OF WORK	अनुलग्नक-III ANNEXURE-III
4	अनुबंध की विशेष शर्तें SPECIAL CONDITIONS OF CONTRACT	अनुलग्नक-IV ANNEXURE-IV
5	अनुपालन / नो-डिविएशन स्टेटमेंट COMPLIANCE / NO-DEVIATION STATEMENT	अनुलग्नक-V ANNEXURE-V
6	अनुबंध की सामान्य शर्तों (जीसीसी) का अनुपालन COMPLIANCE OF GENERAL CONDITIONS OF CONTRACT (GCC)	अनुलग्नक-VI ANNEXURE-VI
7	जाँच सूची CHECK LIST	अनुलग्नक-VII ANNEXURE-VII
8	ईएसआई, पीएफ, श्रमकानून आदि – आवश्यकताएँ ESI, PF, LABOUR LAW ETC. – REQUIREMENTS	अनुलग्नक A ANNEXURE-A
9	श्रम कानून LABOUR LAWS	अनुलग्नकबी ANNEXURE-B
10	सुरक्षा, स्वास्थ्य और पर्यावरण (एसएचई) शर्तें SAFETY, HEALTH & ENVIRONMENT (SHE) CONDITIONS	अनुलग्नकसी ANNEXURE-C
11	ब्लैक लिस्टिंग/ हॉलिडे लिस्टिंग की घोषणा का प्रोफार्मा PROFORMA OF DECLARATION OF BLACK LISTING/ HOLIDAY LISTING	अनुलग्नकडी ANNEXURE-D
12	बोलीदाता का विवरण BIDDER DETAILS	अनुलग्नकई ANNEXURE-E
14	बोली सुरक्षा घोषणा BID SECURITY DECLARATION	अनुलग्नक-एच ANNEXURE-H
18	आदेश के अनुपालन की घोषणा DECLARATION OF COMPLIANCE OF ORDER	अनुलग्नक-आर ANNEXURE-R
19	वाहनों के उपयोग के लिए ठेकेदारों को निर्देश INSTRUCTION TO THE CONTRACTORS FOR USE OF VEHICLES	अनुलग्नक-एस ANNEXURE-S
20	निविदा प्रस्तुत करने के साथ घोषणा पत्र FORM OF DECLARATION ALONG WITH SUBMISSION OF TENDER	अनुलग्नक-डब्ल्यू ANNEXURE-W
21	मचान के उपयोग के लिए मैनुअल MANUAL FOR USE OF SCAFFOLDING	अनुलग्नक-एसी ANNEXURE-AC

इस निविदा के हिंदी तथा अंग्रेज़ी संस्करणों में किसी भी प्रकार की विसंगति होने पर अंग्रेज़ी संस्करण को मूल एवं प्रभावी माना जाएगा।

In case of any discrepancy between the Hindi and English versions of this tender, the English version shall be treated as the original and will prevail.

इस दस्तावेज़ पर हस्ताक्षर किए जाने हैं और स्टाम्प बोलीदाता द्वारा सभी पृष्ठों पर ई-निविदा के साथ एक आवेदन प्रस्तुत किया गया

This Document to be Signed and Stamped by Bidder on All Pages and Submitted along with the E-Tender

**ऑनलाइन बोली प्रस्तुत करने के लिए सामान्य निर्देश**  
**GENERAL INSTRUCTIONS FOR ONLINE BID SUBMISSION**

बोलीदाताओं को अपनी बोलियों की सॉफ्ट कॉपी केंद्रीय सार्वजनिक खरीद पोर्टल (भारत सरकार) पर इलेक्ट्रॉनिक रूप से, वैध डिजिटल हस्ताक्षर प्रमाणपत्रों का उपयोग करके जमा करनी होगी। नीचे दिए गए निर्देश बोलीदाताओं को सीपीपी पोर्टल पर पंजीकरण करने, आवश्यकताओं के अनुसार अपनी बोलियाँ तैयार करने और सीपीपी पोर्टल पर अपनी बोलियाँ ऑनलाइन जमा करने में सहायता के लिए हैं।

The bidders are required to submit soft copies of their bids electronically on the Central Public Procurement Portal (Govt. Of India), using valid **Digital Signature Certificates**. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

सीपीपी पोर्टल पर ऑनलाइन बोलियाँ प्रस्तुत करने के लिए अधिक उपयोगी जानकारी यहां से प्राप्त की जा सकती है:  
<https://eprocure.gov.in/eprocure/app>.

More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.

**पंजीकरण/REGISTRATION**

- बोलीदाताओं को सीपीपी पोर्टल पर "ऑनलाइन बोलीदाता नामांकन" लिंक पर क्लिक करके केंद्रीय सार्वजनिक खरीद पोर्टल (यूआरएल: <https://eprocure.gov.in/eprocure/app>) के ई-प्रोक्योरमेंट मॉड्यूल पर नामांकन करना आवश्यक है, जो नि:शुल्क है।  
Bidders are required to enrol on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link "Online bidder Enrolment" on the CPP Portal which is free of charge.
- नामांकन प्रक्रिया के भाग के रूप में, बोलीदाताओं को एक अद्वितीय उपयोगकर्ता नाम चुनना होगा और अपने खातों के लिए एक पासवर्ड निर्दिष्ट करना होगा।  
As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- बोलीदाताओं को सलाह दी जाती है कि वे पंजीकरण प्रक्रिया के दौरान अपना वैध ईमेल पता और मोबाइल नंबर पंजीकृत कराएँ। सीपीपी पोर्टल से किसी भी संचार के लिए इनका उपयोग किया जाएगा।  
Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- नामांकन के समय, बोलीदाताओं को अपने प्रोफाइल के साथ सीसीए इंडिया (जैसे सिफ़ी / एनकोड / ई-मुद्रा आदि) द्वारा मान्यता प्राप्त किसी भी प्रमाणन प्राधिकरण द्वारा जारी वैध डिजिटल हस्ताक्षर प्रमाणपत्र (हस्ताक्षर कुंजी उपयोग के साथ कक्षा III प्रमाणपत्र) को पंजीकृत करना होगा।  
Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / e-Mudhra etc.), with their profile.
- एक बोलीदाता द्वारा केवल एक ही वैध डीएससी पंजीकृत होना चाहिए। कृपया ध्यान दें कि बोलीदाताओं की यह जिम्मेदारी है कि वे अपनी डीएससी किसी और को उधार न दें, जिससे उसका दुरुपयोग हो सकता है।  
Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- इसके बाद बोलीदाता अपना यूजर आईडी/पासवर्ड तथा डीएससी/ई-टोकन का पासवर्ड दर्ज करके सुरक्षित लॉग-इन के माध्यम से साइट पर लॉग इन करता है।  
Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

**निविदा दस्तावेजों की खोज/SEARCHING FOR TENDER DOCUMENTS**

- सीपीपी पोर्टल में विभिन्न खोज विकल्प उपलब्ध हैं, ताकि बोलीदाताओं को कई मापदंडों के आधार पर सक्रिय निविदाओं को खोजने में सुविधा हो। इन मापदंडों में निविदा आईडी, संगठन का नाम, स्थान, तिथि, मूल्य आदि शामिल हो सकते हैं। निविदाओं के लिए उन्नत खोज का विकल्प भी उपलब्ध है, जहाँ बोलीदाता सीपीपी पोर्टल पर प्रकाशित निविदा को खोजने के लिए संगठन का नाम, अनुबंध का प्रारूप, स्थान, तिथि, अन्य कीवर्ड आदि जैसे कई खोज मापदंडों को संयोजित कर सकते हैं।  
There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.

- बोलीदाताओं द्वारा अपनी रुचि के अनुसार निविदाओं का चयन करने के बाद, वे आवश्यक दस्तावेज़/निविदा अनुसूचियाँ डाउनलोड कर सकते हैं। इन निविदाओं को संबंधित 'मेरी निविदाएँ' फ़ोल्डर में स्थानांतरित किया जा सकता है। इससे सीपीपी पोर्टल, निविदा दस्तावेज़ में कोई शुद्धिपत्र जारी होने की स्थिति में, बोलीदाताओं को एसएमएस/ई-मेल के माध्यम से सूचित कर सकेगा।  
Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- बोलीदाता को प्रत्येक निविदा के लिए निर्दिष्ट विशिष्ट निविदा आईडी को नोट कर लेना चाहिए, ताकि यदि वे हेल्पडेस्क से कोई स्पष्टीकरण/सहायता प्राप्त करना चाहें तो वे ऐसा कर सकें।  
The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk

### **बोलियों की तैयारी/PREPARATION OF BIDS**

- बोलीदाता को अपनी बोलियां प्रस्तुत करने से पहले निविदा दस्तावेज़ पर प्रकाशित किसी भी शुद्धिपत्र को ध्यान में रखना चाहिए। Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- कृपया निविदा विज्ञापन और निविदा दस्तावेज़ को ध्यानपूर्वक पढ़ें ताकि आप बोली के भाग के रूप में प्रस्तुत किए जाने वाले आवश्यक दस्तावेज़ों को समझ सकें। कृपया ध्यान दें कि बोली दस्तावेज़ कितने लिफ़ाफ़ों में प्रस्तुत किए जाने हैं, और प्रस्तुत किए जाने वाले प्रत्येक दस्तावेज़ के नाम और विषय-वस्तु सहित दस्तावेज़ों की संख्या भी। इनमें से किसी भी विचलन पर बोली अस्वीकृत हो सकती है।  
Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- बोलीदाता को निविदा दस्तावेज़/अनुसूची में दर्शाए अनुसार प्रस्तुत किए जाने वाले बोली दस्तावेज़ पहले से तैयार कर लेने चाहिए और आमतौर पर, वे PDF/XLS/RAR/DWF/JPG प्रारूप में हो सकते हैं। बोली दस्तावेज़ों को 100 dpi के साथ काले और सफ़ेद विकल्प के साथ स्कैन किया जा सकता है जिससे स्कैन किए गए दस्तावेज़ का आकार कम करने में मदद मिलती है।  
Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- प्रत्येक बोली के भाग के रूप में प्रस्तुत किए जाने वाले मानक दस्तावेज़ों के एक ही सेट को अपलोड करने में लगने वाले समय और प्रयास से बचने के लिए, बोलीदाताओं के लिए ऐसे मानक दस्तावेज़ों (जैसे पैन कार्ड की प्रति, वार्षिक रिपोर्ट, लेखा परीक्षक प्रमाणपत्र आदि) को अपलोड करने का प्रावधान किया गया है। बोलीदाता ऐसे दस्तावेज़ों को अपलोड करने के लिए "माई स्पेस" या "अन्य महत्वपूर्ण दस्तावेज़" क्षेत्र का उपयोग कर सकते हैं। बोली प्रस्तुत करते समय ये दस्तावेज़ सीधे "माई स्पेस" क्षेत्र से जमा किए जा सकते हैं, और इन्हें बार-बार अपलोड करने की आवश्यकता नहीं होगी। इससे बोली जमा करने की प्रक्रिया में लगने वाले समय में कमी आएगी।  
To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

**नोट:** "मेरे दस्तावेज़" स्थान केवल बोलीदाताओं को अपलोडिंग प्रक्रिया को आसान बनाने के लिए दिया गया एक संग्रह है। यदि बोलीदाता ने अपने दस्तावेज़ "मेरे दस्तावेज़" स्थान में अपलोड कर दिए हैं, तो इससे यह स्वतः सुनिश्चित नहीं होता कि ये दस्तावेज़ तकनीकी बोली का हिस्सा हैं।

**Note:** My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.

### **बोलियों का प्रस्तुतीकरण/ SUBMISSION OF BIDS**

- बोलीदाता को बोली जमा करने से पहले ही साइट पर लॉग इन कर लेना चाहिए ताकि वे समय पर, यानी बोली जमा करने के समय से पहले, बोली अपलोड कर सकें। अन्य किसी भी कारण से होने वाली देरी के लिए बोलीदाता स्वयं ज़िम्मेदार होगा। Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- बोलीदाता को निविदा दस्तावेज़ में दर्शाए अनुसार आवश्यक बोली दस्तावेज़ों पर एक-एक करके डिजिटल हस्ताक्षर करके अपलोड करना होगा।  
The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- बोलीदाता को निविदा शुल्क/ईएमडी का भुगतान करने के लिए "ऑफ़लाइन" भुगतान विकल्प का चयन करना होगा तथा उपकरण का विवरण दर्ज करना होगा।

Bidder has to select the payment option as "offline" to pay the tender fee / EMD as applicable and enter details of the instrument.

4. बोलीदाता को निविदा दस्तावेज़ में दिए गए निर्देशों के अनुसार अग्रिम राशि (ईएमडी) तैयार करनी होगी। मूल प्रति संबंधित अधिकारी को बोली जमा करने की अंतिम तिथि तक या निविदा दस्तावेज़ में दिए गए निर्देशों के अनुसार डाक/कूरियर/व्यक्तिगत रूप से देनी होगी। भौतिक रूप से भेजे गए अग्रिम राशि (डीडी)/किसी अन्य स्वीकृत दस्तावेज़ का विवरण स्कैन की गई प्रति में उपलब्ध विवरण और बोली जमा करते समय दर्ज किए गए डेटा से मेल खाना चाहिए। अन्यथा अपलोड की गई बोली अस्वीकार कर दी जाएगी।

Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.

5. बोलीदाताओं से अनुरोध है कि वे अपनी वित्तीय बोलियाँ दिए गए प्रारूप में ही जमा करें और कोई अन्य प्रारूप स्वीकार्य नहीं है। यदि निविदा दस्तावेज़ के साथ मूल्य बोली मानक BoQ प्रारूप में दी गई है, तो उसे सभी बोलीदाताओं द्वारा डाउनलोड करके भरा जाना चाहिए। बोलीदाताओं को BoQ फ़ाइल डाउनलोड करनी होगी, उसे खोलना होगा और सफ़ेद रंग के (असुरक्षित) कक्षों में अपने संबंधित वित्तीय उद्धरण और अन्य विवरण (जैसे बोलीदाता का नाम) भरने होंगे। अन्य कक्षों में कोई बदलाव नहीं किया जाना चाहिए। विवरण पूरा हो जाने के बाद, बोलीदाता को फ़ाइल का नाम बदले बिना उसे सेव करके ऑनलाइन जमा करना होगा। यदि बोलीदाता द्वारा BOQ फ़ाइल में कोई बदलाव पाया जाता है, तो बोली अस्वीकार कर दी जाएगी।

Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

6. सर्वर समय (जो बोलीदाताओं के डैशबोर्ड पर प्रदर्शित होता है) को बोलीदाताओं द्वारा बोलियाँ प्रस्तुत करने, बोलियाँ खोलने आदि की समय-सीमाओं को संदर्भित करने के लिए मानक समय माना जाएगा। बोलीदाताओं को बोली प्रस्तुत करते समय इस समय का पालन करना चाहिए।

The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

7. डेटा की गोपनीयता सुनिश्चित करने के लिए, बोलीदाताओं द्वारा प्रस्तुत किए जा रहे सभी दस्तावेज़ PKI एन्क्रिप्शन तकनीक का उपयोग करके एन्क्रिप्ट किए जाएंगे। दर्ज किए गए डेटा को बोली खोलने तक अनधिकृत व्यक्ति नहीं देख सकते। बोलियों की गोपनीयता सुरक्षित सॉकेट लेयर 128 बिट एन्क्रिप्शन तकनीक का उपयोग करके बनाए रखी जाती है। संवेदनशील क्षेत्रों का डेटा संग्रहण एन्क्रिप्शन किया जाता है। सर्वर पर अपलोड किया गया कोई भी बोली दस्तावेज़ सिस्टम द्वारा उत्पन्न सममित कुंजी का उपयोग करके सममित एन्क्रिप्शन के अधीन होता है। इसके अलावा, यह कुंजी खरीदार/बोली खोलने वाले की सार्वजनिक कुंजियों का उपयोग करके असममित एन्क्रिप्शन के अधीन होती है। कुल मिलाकर, अपलोड किए गए निविदा दस्तावेज़ अधिकृत बोली खोलने वालों द्वारा निविदा खोलने के बाद ही पढ़ने योग्य होते हैं।

All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.

8. अपलोड किए गए निविदा दस्तावेज़, अधिकृत बोली खोलने वालों द्वारा निविदा खोले जाने के बाद ही पठनीय हो पाते हैं।

The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

9. बोलियों के सफल और समय पर प्रस्तुतीकरण पर (अर्थात् पोर्टल में "फ्रीज बिड सबमिशन" पर क्लिक करने के बाद), पोर्टल एक सफल बोली प्रस्तुतीकरण संदेश देगा और बोली संख्या और बोली प्रस्तुतीकरण की तिथि और समय के साथ बोली सारांश प्रदर्शित किया जाएगा, जिसमें अन्य सभी प्रासंगिक विवरण होंगे।

Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

10. बोली सारांश को मुद्रित करके बोली प्रस्तुत करने की पावती के रूप में रखना होगा। इस पावती का उपयोग किसी भी बोली खोलने वाली बैठक में प्रवेश पास के रूप में किया जा सकता है।

The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

**बोलीदाताओं को सहायता/ ASSISTANCE TO BIDDERS**

1. निविदा दस्तावेज और उसमें निहित नियमों व शर्तों से संबंधित किसी भी प्रश्न के लिए निविदा आमंत्रण प्राधिकारी या निविदा में दर्शाए गए संबंधित संपर्क व्यक्ति से संपर्क किया जाना चाहिए।  
Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
2. ऑनलाइन बोली प्रस्तुत करने की प्रक्रिया से संबंधित कोई भी प्रश्न या सामान्य रूप से सीपीपी पोर्टल से संबंधित प्रश्न 24x7 सीपीपी पोर्टल हेल्पडेस्क पर पूछे जा सकते हैं।  
Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

**संपर्कव्यक्ति/ Contact Person**

(ऑनलाइन प्रस्तुतिकरण पर स्पष्टीकरण/)  
(Clarifications on online submission)

मिधुनबाबू | Mr. Midhun Babu  
उप प्रबंधक (एमएसएस/सामग्री)-एचओसीएल  
Deputy Manager (MSS/Materials) - HOCL  
मोबाइल/ MOB: 854719639 ,8921387812

एचओसीएल कार्यसमन्वयक/ HOCL Work Co-ordinator

श्रीमुहम्मद सुहैल टी वाई | Mr.Muhammed Suhail T. Y.  
वरिष्ठ सिविल इंजीनियर | Senior Civil Engineer  
मोबाइल: Mob : 7736887236  
कार्यालय| Office:: 0484 2727208

*इस दस्तावेज़ पर हस्ताक्षर किए जाने हैं और स्टाम्प बोलीदाता द्वारा सभी पृष्ठों पर ई-निविदा के साथ एक आवेदन प्रस्तुत किया गया*  
*This Document to be Signed and Stamped by Bidder on All Pages and Submitted along with the E-Tender*

**निविदा के सामान्य नियम और शर्तें**  
**GENERAL TERMS AND CONDITIONS OF THE TENDER**

**निविदाकर्ताओं को निम्नलिखित प्रस्तुत करना होगा जिसके बिना निविदा अस्वीकार कर दी जाएगी।**

**The Tenderers shall submit the following without which the tender will be rejected.**

1. निविदा दस्तावेज का पूरा सेट निविदाकर्ता द्वारा निविदा दस्तावेज के विभिन्न खंडों में निर्धारित अनुसार विधिवत भरा और हस्ताक्षरित होना चाहिए।  
Complete set of Tender Document duly filled in and signed by the Tenderer as prescribed in different clauses of the Tender Document.
2. बोलीदाता के पास कार्य के विभिन्न चरणों को पूरा करने के लिए पर्याप्त संख्या में सुयोग्य कार्यबल होना चाहिए। कर्मचारियों/श्रमिकों का विवरण प्रस्तुत करना होगा।  
The bidder should have well qualified workforce in adequate numbers for handling various stages of the work. The staff/workers details are to be furnished.
3. बोलीदाता के पास निर्धारित समय के भीतर कार्य पूरा करने के लिए पर्याप्त संख्या में उपकरण /औजार/टैकल/स्कैफोल्डिंग पाइप/क्लैम्प/स्टेजिंग सामग्री अच्छी स्थिति में होनी चाहिए। उपकरणों का विवरण प्रस्तुत किया जाना चाहिए।  
The bidder should have adequate number of equipments/tools/tackles/scaffolding pipe/clamps/ staging materials in sound condition for the execution of the work within the stipulated time. The equipment details should be furnished.
4. निविदा के खंड संख्या और पृष्ठ संख्या के संदर्भ में अपवाद और विचलन, यदि कोई हो, एक अलग विवरण (कोई विचलन विवरण) के रूप में प्रस्तुत किया जाएगा।  
Exceptions and deviations, if any, with reference to the Clause No. and page No. of Tender shall be submitted as a separate statement (No Deviation Statement)
5. **एमएसएमई के मामले में आवश्यक प्रमाण पत्र ( स्व-सत्यापित ) प्रस्तुत करना होगा।**  
**In the case of MSME, necessary certificate (self attested) shall be submitted.**
6. कोई अन्य तकनीकी जानकारी जो निविदाकर्ता प्रस्तुत करना चाहे।  
Any other technical information the Tenderer likes to furnish.

**बयानाराशिजमा EARNEST MONEY DEPOSIT**

शून्य/ Nil

**दरें RATES**

चुंगी और अन्य शुल्क आदि शामिल होंगे। यदि लागू हो, तो जीएसटी अतिरिक्त देय होगा। बोलीदाता का केंद्रीय उत्पाद शुल्क विभाग में जीएसटी पंजीकरण होना आवश्यक है।

Rates quoted shall be inclusive of all taxes, duties, octroi and other levies etc. GST, in case applicable shall be paid extra. The bidder should have GST registration with Central Excise Department.

**प्रदर्शनसुरक्षा (प्रदर्शनबैंकगारंटी) PERFORMANCE SECURITY (PERFORMANCE BANK GUARANTEE)**

शून्य/ Nil

**सुरक्षाजमाराशि SECURITY DEPOSIT**

शून्य/ Nil

**परिसमापन हर्जाना LIQUIDATED DAMAGES**

शून्य/ Nil

**अनुबंध की अवधि PERIOD OF CONTRACT**

अनुबंध की अवधि कार्य आदेश जारी होने की तिथि से **2 महीने** होगी।

Period of Contract shall be **2 months** from the date of instruction to start the work.

**पूरा होने का समय TIME OF COMPLETION**

कार्य पूरा होने की अवधि कार्य शुरू करने की सूचना की तारीख से **1 महीने** होगी।

Time of completion for the work shall be **1 months** from the date of instruction to start the work.

**निविदा की वैधता VALIDITY OF THE TENDER**

निविदा को निविदा खुलने की तिथि से 90 दिनों की अवधि तक स्वीकृति के लिए वैध रखा जाएगा।

निविदाकर्ता 90 दिनों की उक्त अवधि के दौरान कंपनी की लिखित सहमति के बिना अपनी निविदा को रद्द करने या निविदा दर या

उसकी किसी शर्त में परिवर्तन करने का हकदार नहीं होगा।

The tender shall be kept valid for acceptance for a period of 90 days from the date of tender opening.

A Tenderer shall not be entitled during the said period of 90 days without the consent in writing of the company to revoke or cancel his tender or to vary the tendered rate or any terms thereof.

### **कीमत PRICE**

जब तक अन्यथा निर्दिष्ट न हो, अनुबंध एक निश्चित, सर्वसमावेशी मूल्य पर प्रदान किया जाएगा। निविदा में सभी दरें लागू करें, शुल्कों और शुल्कों को कवर करेंगी। हालांकि, लागू जीएसटी का भुगतान एचओसीएल द्वारा किया जाएगा, बशर्ते कि सफल निविदाकर्ता के पास केंद्रीय उत्पाद शुल्क के साथ जीएसटी पंजीकरण हो।

मूल्य अंकों और शब्दों दोनों में उद्धृत किया जाएगा। यदि किसी निविदाकर्ता ने शब्दों और अंकों में दो अलग-अलग मूल्य उद्धृत किए हैं, तो उनमें से कम मूल्य को ही वैध माना जाएगा और निविदाकर्ता पर बाध्यकारी होगा।

The Contract will be awarded on fixed all-inclusive price unless otherwise specified. All rates in the tender shall cover applicable taxes, levies and duties. However applicable GST will be paid by HOCL subject to the successful tenderer having GST registration with Central Excise.

The price shall be quoted both in figures and words. In case a tenderer has quoted two different prices in words and figures the lower of the two will be considered valid and binding on the tenderer.

### **भुगतान की शर्तें PAYMENT TERMS**

भुगतान चालू खाते के बिलों के लिए 15 दिनों के भीतर तथा बिल प्रस्तुत करने के बाद अंतिम बिल के लिए 30 दिनों के भीतर किया जाएगा, जो निष्पादित मात्रा के आधार पर प्रभारी अभियंता की सिफारिशों पर तथा कार्य आदेश में दिए गए प्रावधानों के अनुसार कटौती करने के बाद किया जाएगा।

Payment will be made within 15 days for running account bills and within 30 days for final bill after submission of bill, on recommendations of the Engineer in charge based on the quantities executed and after making deductions as provided in the work order.

### **दोष दायित्व अवधि DEFECT LIABILITY PERIOD**

#### **जीसीसी के अनुसार**

As per GCC.

### **अन्य नियम और शर्तें OTHER TERMS AND CONDITION**

अन्य सभी नियम और शर्तें हमारी वेबसाइट पर प्रकाशित अनुबंध की सामान्य शर्तों और अनुबंध की विशेष शर्तों के अनुसार होंगी। सामान्य अनुबंध शर्तें और अनुबंध की विशेष शर्तें सभी कार्य दिवसों में कार्यालय समय के दौरान हमारे कार्यालय में भी देखी जा सकती हैं।

All other Terms and Conditions will be as per our General Conditions of Contract, as published in our website and special condition of contract. The GCC and Special conditions of contract can also be referred in our office during office hours in all working days.

### **एचओसीएल के अनुबंध की सामान्य शर्तें (जीसीसी) GENERAL CONDITIONS OF CONTRACT (GCC) OF HOCL**

कंपनी के अनुबंध की सामान्य शर्तें लागू होती हैं और अनुबंध का हिस्सा बनती हैं।

एचओसीएल के अनुबंध की सामान्य शर्तें एचओसीएल, अंबालामुगल के मुख्य महाप्रबंधक (मानव संसाधन) के कार्यालय में उपलब्ध हैं या हमारी वेबसाइट [www.hoclkochi.com](http://www.hoclkochi.com) से डाउनलोड की जा सकती हैं।

The General Conditions of Contract of the company is applicable to, and forms part of the contract.

The General Conditions of Contract of HOCL is available in the office of The Chief General Manager (HR) of HOCL, Ambalamugal or can be downloaded from our Web site [www.hoclkochi.com](http://www.hoclkochi.com).

### **परिशिष्ट जारी करने का अधिकार RIGHT TO ISSUE ADDENDUM**

कंपनी निविदा दस्तावेज़ में उल्लिखित किसी भी शर्त, खंड या नियम को स्पष्ट/संशोधित/पूरित करने और/या हटाने के लिए निविदा दस्तावेज़ में कोई भी परिशिष्ट जारी करने का अधिकार सुरक्षित रखती है। जारी किया गया प्रत्येक परिशिष्ट निविदाकर्ता या उसके अधिकृत प्रतिनिधि को वितरित किया जाएगा और ऐसा प्रत्येक परिशिष्ट निविदा दस्तावेज़ का हिस्सा बन जाएगा।

The company reserves the right to issue any addendum to the tender document to clarify/amend/supplement and/ or delete any of the conditions, clauses or terms stated in the tender documents. Each addendum issued shall be distributed to the tenderer or his authorized representative and each such addendum shall become part of the tender documents.

### **नियत तिथि और समय DUE DATE & TIME**

नियत तारीख निविदा प्रस्तुत करने की अंतिम तिथि 11.04.2026 अपराह्न 02.00 बजे है।

Due date for submission of tender is (Closing date) 11.04.2026 at 02.00 PM.

### **बोलियों का खुलना OPENING OF BIDS**

बोलियाँ 13.04.2026 को दोपहर 2:00 बजे इलेक्ट्रॉनिक रूप से खोली जाएँगी।

The Bids will be opened on 13.04.2026 at 2:00 PM electronically.

### **बोली-पूर्व बैठक PRE-BID MEETING**

लागू नहीं | Not applicable.

**बोलियां प्रस्तुत करना/ SUBMISSION OF BIDS:**

अनुलग्नक 1 देखें।

Refer Annexure I.

**मूल्य बोली प्रस्तुति-बीओक्यू : PRICE BID SUBMISSION-BOQ:**

बोलीदाताओं से अनुरोध है कि वे ध्यान रखें कि उन्हें अनिवार्य रूप से सभी बोलीदाताओं को दिए गए प्रारूप में अपनी वित्तीय बोलियां जमा करनी होंगी और कोई अन्य प्रारूप स्वीकार्य नहीं है। यदि मूल्य बोली निविदा दस्तावेज के साथ मानक बीओक्यू प्रारूप के रूप में दी गई है, तो उसे डाउनलोड किया जाना चाहिए और सभी बोलीदाताओं द्वारा भरा जाना चाहिए। बोलीदाताओं को बीओक्यू फाइल डाउनलोड करने, इसे खोलने और नीले रंग के असुरक्षित (खानों को उनके संबंधित वित्तीय उद्धरण और अन्य विवरणों के साथ पूरा करना होगा) ऑनलाइन बोली जमा करने के लिए बोलीदाता के निर्देश देखें। जैसे बोलीदाता का नाम (। किसी अन्य खानों को इसे सहेजना नहीं चाहिए और फाइल नाम को बदले बिना इसे ऑनलाइन जमा करना चाहिए। यदि बीओक्यू फाइल बोलीदाता द्वारा संशोधित पाई जाती है, तो बोली को अस्वीकार कर दिया जाएगा।

Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the blue coloured (unprotected) cells with their respective financial quotes and other details Refer Instructions to Bidder for Online Bid Submission. (such as name of the bidder). No other cells should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

**बोली को अस्वीकार करने का अधिकार: RIGHT TO REJECT A BID:**

एचओसीएल निम्नलिखित कारणों से किसी भी बोली को अस्वीकार करने का अधिकार सुरक्षित रखता है:

- क. विक्रेता द्वारा उपरोक्त बोली प्रक्रिया का पालन न करना
- ख. विक्रेता का एचओसीएल को तकनीकी रूप से स्वीकार्य न होना
- ग. तकनीकी वाणिज्यिक बोली के साथ ईएमडी संलग्न न करना या निर्धारित राशि से कम ईएमडी का भुगतान करना
- घ. विक्रेता निविदा की सामान्य शर्तों से सहमत नहीं है।
- ङ. मांगे गए किसी विशेष दस्तावेज को संलग्न न करना
- च. कोई अन्य वैध कारण।

HOCL reserves the right to reject any bid due to reasons such as

- (a) Vendor not following above bidding procedures
- (b) Vendor not being technically acceptable to HOCL
- (c) Not enclosing EMD with the techno commercial bid or EMD paid being lesser than the stipulated amount
- (d) Vendor not agreeing with the general conditions of the tender.
- (e) Not enclosing any particular documents asked for
- (f) Any other valid reasons.

**बोलियों के सभी पृष्ठों पर हस्ताक्षर एवं मुहर लगाना : SIGNING & STAMPING ON ALL PAGES OF BIDS:**

विक्रेता को अपलोड की गई बोलियों के सभी पृष्ठों पर हस्ताक्षर और मुहर लगानी होगी, अन्यथा बोलियां अस्वीकार कर दी जाएंगी।

The vendor shall sign and stamp on all the pages of the bids uploaded, failing which bids are liable to be rejected.

**विवादों का मध्यस्थता ARBITRATION OF DISPUTES**

इस निविदा/समझौते/क्रय आदेश/कार्य आदेश से उत्पन्न, इसके अंतर्गत या इससे संबंधित सभी विवादों, मतभेदों, प्रश्नों और दावों का पक्षों के बीच आपसी बातचीत के माध्यम से सौहार्दपूर्ण ढंग से निपटारा किया जाएगा और ऐसा न होने पर, ऐसे विवादों, मतभेदों, प्रश्नों या दावों को मध्यस्थता के माध्यम से समाधान के लिए भारत अंतर्राष्ट्रीय मध्यस्थता केंद्र या एचओसीएल के अध्यक्ष-सह-प्रबंध निदेशक द्वारा नियुक्त एकमात्र मध्यस्थ के पास भेजा जाएगा और मध्यस्थता का निर्णय अंतिम और पक्षों पर बाध्यकारी होगा। मध्यस्थता का स्थान कोच्चि, केरल, भारत में होगा और मध्यस्थता की कार्यवाही भारत अंतर्राष्ट्रीय मध्यस्थता केंद्र अधिनियम / 2019 भारतीय मध्यस्थता और सुलह अधिनियम 1996 या वर्तमान में लागू किसी वैधानिक संशोधन या उसके पुनः अधिनियमन के अनुसार कोच्चि, केरल, भारत में आयोजित की जाएगी।

All disputes, differences, questions and claims arising out of, under or touching upon this Tender /Agreement/ Purchase Order/ Work Order shall be settled amicably between the parties through mutual discussion and failing that, such disputes, difference, questions or claims shall be referred for resolution through arbitration to the India International Arbitration Centre or a Sole Arbitrator to be appointed by the Chairman-cum-Managing Director of HOCL and the award of Arbitration shall be final and binding on the parties. The seat of the Arbitration shall be at Kochi, Kerala, India and the proceedings of the arbitration shall be held at Kochi, Kerala, India in accordance with the India International Arbitration Centre Act 2019 / Indian Arbitration & Conciliation Act 1996 or any statutory modification or re-enactment thereof for the time being in force.

**अखंडता संधि INTEGRITY PACT**

शून्य/ Nil

**संलग्नक ENCLOSURE**

- अनुलग्नक ए -ईएसआई,पीएफ,श्रम कानून आदि – आवश्यकताएँ  
ANNEXURE A - ESI, PF, Labour Law Etc. – Requirements
- अनुलग्नक बी -श्रम कानून – जाँच सूची  
ANNEXURE B - Labour Laws – Check List
- अनुलग्नक सी -सुरक्षा,स्वास्थ्य और पर्यावरण( शी) शर्तें  
ANNEXURE C - Safety, Health & Environment (She) Conditions
- अनुलग्नक डी -ब्लैक लिस्टिंग/हॉलिडे लिस्टिंग की घोषणा का प्रोफार्मा  
ANNEXURE D - Proforma of Declaration of Black Listing/Holiday Listing
- अनुलग्नक ई -एमएसई विवरण  
ANNEXURE E - MSE Details
- अनुलग्नक एच -बोली सुरक्षा घोषणा  
ANNEXURE H - Bid Security declaration
- अनुलग्नक आर -आदेश के अनुपालन की घोषणा  
ANNEXURE R - Declaration of compliance of order
- अनुलग्नक एस -वाहनों के उपयोग के लिए ठेकेदार को निर्देश  
ANNEXURE S - Instruction to the contractor for use of vehicles
- अनुलग्नक डब्ल्यू -निविदा प्रस्तुत करनेके साथ घोषणा का प्रारूप  
ANNEXURE W - Form of declaration along with submission of tender
- अनुलग्नक-एसी -मचान के उपयोग के लिए मैनुअल  
ANNEXURE -AC MANUAL FOR USE OF SCAFFOLDING

*इस दस्तावेज़ पर हस्ताक्षर किए जाने हैं और स्टाम्प बोलीदाता द्वारा सभी पृष्ठों पर ई-निविदा के साथ एक आवेदन प्रस्तुत किया गया  
This Document to be Signed and Stamped by Bidder on All Pages and Submitted along with the E-Tender*

कार्य का नाम: कूलिंग टावर 1 में CPVC लाइन की आपूर्ति और बिछाना  
Name of Work: SUPPLY AND LAYING OF CPVC LINES IN COOLING TOWER - 1

निविदा संदर्भ संख्या : CIV10255/2025

Tender Ref. No : CIV10255/2025

#### SCOPE OF WORK

1. The contractor should carry out the work as per the schedule of works.
2. All tools, tackles, required for the work shall be brought by the contractor at his cost.
3. HOC will provide water and electricity at one point inside company premises and contractor shall make his own arrangements for taking necessary connections from that point.
4. The work comprises, supply, installation, testing, and commissioning of CPVC pipeline system for cooling tower application, complete in all respects.
5. All CPVC pipes, fittings, and accessories shall be of approved make and quality and shall be got approved from the Engineer-in-Charge (EIC) prior to procurement and installation.
6. CPVC pipes and fittings shall be of Supreme, Astral, Prince Pipe, Ashirvad Pipes or other equivalent makes as approved by the Engineer-in-Charge.
7. The scope includes laying of CPVC pipeline from chlorinator to cold basin of the cooling tower and providing CPVC lines for sampling points at each top level of the cooling tower, laying the hydrocarbon detector line at top of cooling tower -1 with routing finalized in consultation with the Engineer-in-Charge.
8. The quoted rate for laying of CPVC pipeline shall be deemed to include the cost of all necessary fittings such as bends, elbows, tees, reducers, unions, couplers, and all jointing materials required for complete installation, and no separate payment shall be made for these items; however, CPVC ball valves, specified separately in the Schedule of Items, shall be measured and paid separately.
9. The contractor shall fix adequate pipe supports, clamps, hangers, and structural supports properly anchored to withstand operational and environmental loads. (Structural supports shall be given by HOCL. Contractor shall make necessary arrangements for fixing it).
10. The contractor shall arrange all required scaffolding, ladders, working platforms, and access arrangements for execution of work at height, and no additional payment shall be made for the same.
11. All pipes shall be cut, jointed, and installed strictly as per manufacturer's specifications using approved solvent cement, ensuring proper alignment and workmanship.
12. The entire pipeline system shall be tested hydraulically for leakage and pressure integrity, and any defects or leakages shall be rectified by the contractor at no extra cost.
13. The contractor shall comply with all plant safety regulations, use required personal protective equipment (PPE), and obtain necessary work permits prior to execution.
14. All debris, waste materials, and scrap generated during execution shall be cleared and disposed of by the contractor, and the site shall be maintained in a clean condition.
15. The exact value of contract shall be subject to variations depending upon the actual quantities of work executed at site measured jointly accepted and paid for at the end of the contract.

#### 16. SPECIFICATIONS AND MODE OF MEASUREMENTS

All items of work shall have the best workmanship and be executed to the entire satisfaction of the Engineer-in-charge. Unless otherwise specified, the specifications and mode of measurements for various items of work shall conform to the standard detailed specifications and mode of measurements for works. In case standard specifications and mode of measurements for any items of works are not applicable, CPWD specifications for such items may be referred to. In case, this is also not applicable, then the specification and mode of measurements to be followed will be laid out by the Engineer-in-charge on the basis of relevant ISI code of practice or otherwise accepted Engg. Practice.

- a). The quantities given in the schedule are only estimated and tentative and may vary on either side, but the rates quoted shall remain firm without any of escalation on any account during the entire contract period. No claims on account of increase or decrease of quantities under certain items and or over all work will be entertained.

b). The exact value of contract shall be subject to variations depending upon the actual quantities of work executed at site measured jointly accepted and paid for at the end of the contract

**17. The contractor shall visit the site before quoting to understand the actual site conditions, routing constraints, and working environment, and no claims due to lack of site knowledge shall be entertained later.**

#### SCOPE OF SUPPLY

##### MATERIAL

a. Contractors Scope

All materials required for the satisfactory completion of the work shall be on contractor's scope.

b. HOCL Scope

Nil.

##### TOOLS & TACKLES

a. Contractor's Scope

All tools and tackles required for the work will be arranged by the contractor.

b. HOCL's Scope

Nil.

*इस दस्तावेज़ पर हस्ताक्षर किए जाने हैं और स्टाम्प बोलीदाता द्वारा सभी पृष्ठों पर ई-निविदा के साथ एक आवेदन प्रस्तुत किया गया  
This Document to be Signed and Stamped by Bidder on All Pages and Submitted along with the E-Tender*

कार्य का नाम: कूलिंग टावर 1 में CPVC लाइन की आपूर्ति और बिछाना  
Name of Work: SUPPLY AND LAYING OF CPVC LINES IN COOLING TOWER - 1

निविदा संदर्भ संख्या : CIV10255/2025

Tender Ref. No : CIV10255/2025

**अनुबंध की विशेष शर्तें / SPECIAL CONDITIONS OF CONTRACT**

- कार्य के लिए नियोजित श्रमिकों और पर्यवेक्षकों के लिए सुरक्षा हेलमेट, सुरक्षा जूते, चश्मे, सुरक्षा बेल्ट और अन्य पीपीई आदि की व्यवस्था ठेकेदार द्वारा की जानी है।  
Safety Helmets, safety shoes, goggles, safety belts and other PPEs etc. for the workmen and supervisor employed for the work are to be arranged by the contractor.
- ठेकेदार के कर्मचारियों द्वारा सुरक्षा उपकरण (पीपीई) पहने बिना, सीमित स्थान में प्रवेश रिकॉर्ड और सुरक्षा कार्य परमिट के बिना कोई भी कार्य नहीं किया जाएगा।  
No work to be carried out without wearing safety gadgets (PPE's), confined space entry record and safety work permit by the employees of the contractor.
- श्रम कानूनों के अधीन कार्य शुरू करने से पहले प्रवेश की पूर्व अनुमति लेनी होगी।  
Also all your workers are to be subjected to take previous permission for entry before the work subjected to labour laws.
- आप अपने कर्मचारियों को सार्वजनिक स्थानों और कार्य क्षेत्र में थूकने से सख्ती से मना करेंगे।  
You shall strictly instruct your workers not to spit in the public places and area of work.
- संपूर्ण कार्य मानक इंजीनियरिंग पद्धति के अनुसार किया जाना है तथा एचओसी/तृतीय पक्ष निरीक्षण एजेंसी द्वारा चरणबद्ध निरीक्षण किया जाना ।  
The entire work is to be carried out as per the standard engineering practice and subjected to stage inspection by HOC/3<sup>rd</sup> party inspection agency.
- कार्य से उत्पन्न होने वाले सभी मलबे, अपशिष्ट आदि को प्रभारी इंजीनियर के निर्देशानुसार एचओसी परिसर के अंदर कहीं भी निपटाया जाना चाहिए।  
All debris, waste etc. arising out of the job should be disposed anywhere inside HOC premises as per direction of engineer in charge.
- यदि कार्य की प्रगति और गुणवत्ता असंतोषजनक पाई जाती है, तो एचओसी को कार्य रोकने का पूरा अधिकार है। शेष कार्य एचओसी द्वारा किसी अन्य एजेंसी के माध्यम से प्रथम ठेकेदार की लागत और जोखिम पर कराया जाएगा।  
HOC has every right to stop the work if the progress and quality of work is found unsatisfactory. The balance work will be carried out by HOC through another agency at the cost and risk of the first contractor.
- ठेकेदार को कार्य शुरू करने के लिए सूचना मिलने के समय से उचित अवधि के भीतर आवश्यक उपकरणों और उपकरणों के साथ पूरी टीम को जुटाना होगा।  
Contractor has to mobilize the complete team with necessary tools and tackles within reasonable period from the time of intimation to start the work.
- पूरे कार्य के दौरान ठेकेदार या उसका अधिकृत पर्यवेक्षक कार्य स्थल पर उपलब्ध रहेगा।  
Either the contractor or his authorized supervisor shall be available at work site throughout the work.
- कार्य के निष्पादन के दौरान होने वाली किसी दुर्घटना से उत्पन्न होने वाली देयता के कवरेज के लिए ठेकेदार द्वारा अपने द्वारा नियोजित लोगों के लिए उचित बीमा की व्यवस्था की जाएगी।  
Appropriate insurance shall be arranged by the contractor for the coverage of the liability to the people employed by them, arising out of any accident occurring during the execution of the work.
- ठेकेदार को अनुबंध-ए, बी और सी में दिए गए सभी खंडों का पालन करना होगा जैसे ईएसआई, सुरक्षा विनियम और अनुबंध की सामान्य शर्तें, कामगार मुआवजा, व्यक्तिगत सुरक्षा उपकरण (पीपीई), श्रम कानून, पीएफ, पर्यावरण संरक्षण और सीमित स्थान में प्रवेश के लिए ठेकेदारों/आपूर्तिकर्ताओं को दिशानिर्देश  
The Contractor shall follow all clause in Annexure – A, B & C like ESI, Safety Regulations and General Conditions of Contract, Workmen Compensation, Personal Protective Equipments (PPE), Labor Laws, PF, Guidelines to contractors / suppliers for environmental protection & Confined Space Entry
- ठेकेदार को एचओसी में सामग्री लाने के लिए प्रभारी इंजीनियर से पूर्व अनुमति लेनी होगी।  
Contractor shall get prior permission from the Engineer-in-Charge for bringing the material to HOC.

***This Document to be Signed and Stamped by Bidder on All Pages and Submitted along with the E-Tender***

कार्य का नाम: **कूलिंग टावर 1 में CPVC लाइन की आपूर्ति और बिछाना**  
Name of Work: **SUPPLY AND LAYING OF CPVC LINES IN COOLING TOWER - 1**

निविदा संदर्भ संख्या: CIV10255/2025

Tender Ref. No.: **CIV10255/2025**

**अनुपालन / नो-डिवीजनस्टेटमेंट**  
**COMPLIANCE / NO-DEVIATION STATEMENT**

निविदा आईडी/ Tender ID:

एतद्वारा यह बताया जाता है कि हमारे द्वारा प्रस्तुत कोटेशन/प्रस्ताव जांच के विरुद्ध जारी किए गए दस्तावेजों के पूर्णतः अनुरूप है तथा यह भी पुष्टि की जाती है कि जांच के अनुसार सभी नियमों व शर्तों से कोई विचलन नहीं है।

It is hereby stated that the quotation/offer submitted by us is in full compliance with the documents issued against the enquiry and also further confirmed that there is no deviation from all the terms and conditions as per the enquiry.

निविदाकर्ता के हस्ताक्षर

Signature of the Tenderer :

निविदाकर्ता का नाम

Name of the Tenderer

पता

Address

स्थान

Place

सील SEAL

तारीख

Date

**इस दस्तावेज़ पर हस्ताक्षर किए जाने हैं और स्टाम्प बोलीदाता द्वारा सभी पृष्ठों पर ई-निविदा के साथ एक आवेदन प्रस्तुत किया गया**  
**This Document to be Signed and Stamped by Bidder on All Pages and Submitted along with the E-Tender**

कार्य का नाम: **कूलिंग टावर 1 में CPVC लाइन की आपूर्ति और बिछाना**  
Name of Work: **SUPPLY AND LAYING OF CPVC LINES IN COOLING TOWER - 1**

निविदा संदर्भ संख्या: CIV10255/2025

Tender Ref. No.: CIV10255/2025

### जाँच सूची CHECK LIST

1. सामान्य नियम एवं शर्तें, कार्य का दायरा (अनुलग्नक II, III, IV, V, VI, VII A, B एवं C) (निविदा दस्तावेजों का पूरा सेट) सभी पृष्ठों पर हस्ताक्षर एवं मुहर लगाकर स्कैन एवं अपलोड किया जाना है (हां/नहीं)।  
General Terms and Conditions, Scope of Work (Annexure II, III, IV, V, VI, VII A, B & C) (complete set of Tender Documents) to be signed and stamped on all pages, scanned and uploaded (YES/NO).
2. ब्लैक लिस्टिंग/हॉलिडे लिस्टिंग की घोषणा का प्रोफार्मा (अनुलग्नक डी) - विधिवत भरा हुआ, हस्ताक्षरित और मुहर लगा हुआ, स्कैन किया हुआ और अपलोड किया हुआ (हां/नहीं)।  
Proforma of Declaration of Black Listing/ Holiday Listing (Annexure D) - duly filled, signed and stamped, scanned and uploaded (YES/NO).
3. बोलीदाता सूचना (अनुलग्नक - ई) - अपनी पुष्टि के सामने ✓ चिह्न लगाएं, हस्ताक्षरित और मुहर लगी हुई, स्कैन की हुई और अपलोड की हुई (हां/नहीं)।  
Bidder Information (Annexure - E) - put ✓ mark in front of your confirmation, signed and stamped, scanned and uploaded (YES/NO).
4. बोली सुरक्षा घोषणा (अनुलग्नक एच) - विधिवत भरा हुआ, हस्ताक्षरित और मुहर लगा हुआ, स्कैन किया हुआ और अपलोड किया हुआ। (हां/नहीं)।  
Bid security Declaration (Annexure H) - duly filled, signed and stamped, scanned and uploaded. (YES/NO)
5. आदेश के अनुपालन की घोषणा (अनुलग्नक आर) - विधिवत भरा हुआ, हस्ताक्षरित और मुहर लगा हुआ, स्कैन किया हुआ और अपलोड किया हुआ (हां नहीं)।  
Declaration of compliance of order (Annexure R) - duly filled, signed and stamped, scanned and uploaded (YES/NO).
6. वाहनों के उपयोग के लिए ठेकेदार को निर्देश (अनुलग्नक एस) - विधिवत भरा हुआ, हस्ताक्षरित और मुहर लगा हुआ, स्कैन किया हुआ और अपलोड किया हुआ (हां नहीं)।  
Instruction to the contractor for use of vehicles (Annexure S) - duly filled, signed and stamped, scanned and uploaded (YES/NO).
7. निविदा प्रस्तुत करने के साथ घोषणा पत्र (अनुलग्नक डब्ल्यू) - विधिवत भरा हुआ, हस्ताक्षरित और मुहर लगा हुआ, स्कैन किया हुआ और अपलोड किया हुआ (हां नहीं)।  
Form of declaration along with submission of tender (Annexure W) - duly filled, signed and stamped, scanned and uploaded (YES/NO).
8. उपकरण/औजारों की सूची अपलोड की गई है (हां/नहीं)।  
Equipment/tools list is uploaded (YES/NO).
9. मचान के उपयोग के लिए मैनुअल हस्ताक्षरित और अपलोड किया गया - अनुलग्नक - एसी (हां/नहीं)।  
Manual for use of scaffolding signed and uploaded – Annexure – AC (YES/NO).
10. निविदा के खंड संख्या और पृष्ठ संख्या के संदर्भ में अपवाद और विचलन, यदि कोई हो, एक अलग विवरण (विचलन विवरण) के रूप में प्रस्तुत किया जाएगा।  
Exceptions and deviations, if any, with reference to the Clause No. and page No. of Tender shall be submitted as a separate statement (Deviation Statement)

सभी पृष्ठों पर हस्ताक्षरित एवं मुहरबंद निविदा दस्तावेज संलग्न करें (निविदा सूचना, कार्य का दायरा, अनुबंध की शर्तें, अनुभव प्रमाण पत्र की प्रतियां, कार्य आदेश, आदि)।

Enclosed the tender documents signed & sealed in all pages (Tender Notice, Scope of Work, Conditions of Contract, Copies of Experience Certificate, Work Orders, etc.)

निविदाकर्ता के हस्ताक्षर :  
Signature of the Tenderer

निविदाकर्ता का नाम :  
Name of the Tenderer

पता :  
Address

जगह:

Place:

तारीख:

Date:

*इस दस्तावेज़ पर हस्ताक्षर किए जाने हैं और स्टैम्प डी बोलीदाता द्वारा सभी पृष्ठों पर ई-निविदा के साथ एक आवेदन प्रस्तुत किया गया*

*This Document to be Signed and Stamped by Bidder on All Pages and Submitted along with the E-Tender*

## संलग्नक क ANNEXURE – A

### ईएसआई, पीएफ, श्रम कानून आदि - आवश्यकताएं ESI, PF, LABOUR LAW ETC. – REQUIREMENTS

#### **1. ईएसआई अधिनियम 1948 के अनुसार ईएसआई ESI As per the ESI Act 1948**

ठेकेदार काम के लिए तैनात अपने सभी लोगों को ईएसआई योजना में नामांकित करेगा। ईएसआई योजना के तहत सभी कामगारों के पंजीकरण का भी अनुपालन किया जाना है।

The Contractor shall enroll all his men deployed for the work in the ESI scheme. Registration for all workmen under ESI scheme is also to be complied with.

#### **2. सुरक्षा विनियम और अनुबंध की सामान्य शर्तें Safety Regulations and General Conditions of Contract**

ठेकेदार को जीसीसी में निर्दिष्ट एचओसी के सभी सुरक्षा विनियमन का कड़ाई से पालन करना चाहिए। ठेकेदार को हर दिन प्रत्येक शिफ्ट में काम शुरू करने से पहले अधिकृत अधिकारी से आवश्यक सुरक्षा कार्य परमिट प्राप्त करना चाहिए।

The Contractor should be strictly abide all the safety regulation of HOC specified in GCC. Contractor should obtain necessary safety work permit from authorised officer before starting the work every day, in every shift.

#### **3. कामगार मुआवजा Workmen Compensation**

कर्मकार मुआवजा अधिनियम 1923 के तहत मुआवजे के सभी दावों को पूरा करना आपकी जिम्मेदारी होगी। काम पूरा करने के लिए आपके द्वारा लगाए कामगारों को हुई बीमारी, दुर्घटनाओं से चोट या मौत के संबंध में ईएसआई या किसी अन्य कानून। कर्मचारी राज्य बीमा अधिनियम 1948 का पालन करना ठेकेदार की एकमात्र जिम्मेदारी होगी। आप अपने द्वारा किए गए ठेके कार्य के निष्पादन से या उसके दौरान उत्पन्न होने वाली संपत्ति की हानि या व्यक्तियों को हुई नुकसान के दावों के संबंध में भी जिम्मेदार और उत्तरदायी होंगे। आप एतद्वारा सहमत हैं कि आप कर्मकार मुआवजा अधिनियम और उपरोक्त सभी अन्य दावों के तहत दावों के संबंध में पूरी तरह से एचओसी को क्षतिपूर्ति रखेंगे और आप किसी भी परिस्थिति में इसके संबंध में कोई विवाद नहीं उठाएंगे।

It will be your responsibility to meet all claims for compensation under workmen's Compensation Act 1923. ESI or under any other law in respect of sickness, accidents injury or death suffered by workmen engaged by you for carrying out the work. It shall be the sole responsibility of the contractor to comply with Employee's State Insurance Act 1948. You will also be responsible and liable in respect of claims for damage to property or persons arising from or in the course of execution of the contract work undertaken by you. You hereby agree that you shall keep HOC fully indemnified in respect of claims under the Workmen Compensation Act and all other claims aforesaid and you shall not under any circumstances raise any dispute with regard to the same.

#### **4. व्यक्तिगत सुरक्षा उपकरण (पीपीई) Personal Protective Equipments (PPE)**

आपसे अनुरोध है कि व्यक्तिगत सुरक्षा उपकरणों का उपयोग करें जैसे कि  
You are requested to use personal protective equipment such as

1. सुरक्षा हेलमेट Safety Helmet
2. सुरक्षा बेल्ट Safety belts
3. वेल्डर के व्यक्तिगत सुरक्षा उपकरण जैसे गॉगल्स, दस्ताने, जूते और फेस शील्ड  
Welder's Personal Protective equipment like goggles, gloves, shoes and face shield

COVID-19 के प्रसार को रोकने के उपाय के रूप में, निम्नलिखित पीपीई अनिवार्य रूप से आपके श्रमिकों को प्रदान करने की आवश्यकता है:

As a measure to contain the spread of COVID-19, the following PPEs are essentially required to be provide to your workers:

1. फेस मास्क Face Mask
2. फेस शील्ड Face Shield
3. हैंड ग्लोवस Hand Gloves

साथ ही आपके सभी श्रमिकों को सुरक्षा पर तापमान की जांच, प्रवेश द्वार पर हाथ धोना, जहां तक संभव हो शारीरिक दूरी बनाए रखना है।

Also all your workers are to be subjected to temperature screening at Security, hand wash at the entrance, maintain physical distancing as far as possible.

आप अपने श्रमिकों को कड़ाई से निर्देश देंगे कि वे सार्वजनिक स्थानों और काम के क्षेत्र में न थूकें।  
You shall strictly instruct your workers not to spit in the public places and area of work.

यह ठेकेदार की मूल जिम्मेदारी है कि वह अपने सभी पर्यवेक्षकों/श्रमिकों को ऊपर उल्लिखित सभी सुरक्षा उपकरण (पीपीई) प्रदान करे।

It is the basic responsibility of the Contractor to provide all the safety gadgets (PPEs) as mentioned above to all their Supervisors/Workers.

और इन पीपीई के बिना ठेकेदार को कोई भी काम करने की अनुमति नहीं दी जाएगी, जिसे कृपया नोट किया जा सकता है।

And without these PPEs Contractor will not be allowed to carryout any job, which may please be noted.

#### 5. **श्रम कानून और भविष्य निधि Labour Laws & Provident Fund**

आपसे अनुरोध है कि आपके पास होने के लिए You are requested to possess:

1. अनुबंध श्रम (विनियमन और उन्मूलन) अधिनियम 1970 के तहत श्रम विभाग से एक लाइसेंस।  
A License from the Labour Dept. under Contract Labour (Regulation and Abolition) Act 1970.
2. कर्मचारी पीएफ अधिनियम - 1952 के तहत एक अलग पीएफ कोड और क्षेत्रीय पीएफ आयुक्त के साथ किए गए सीपीएफ योगदान भुगतान का विवरण भी प्रस्तुत करें।  
A separate PF Code under the Employee PF Act – 1952 and also furnish details of CPF Contribution payment made with the Regional PF Commissioner.

#### 6. **पर्यावरण संरक्षण के लिए ठेकेदारों/आपूर्तिकर्ताओं को दिशानिर्देश**

##### **Guidelines to Contractors/Suppliers for Environmental Protection**

- ठेकेदार/आपूर्तिकर्ता यह सुनिश्चित करेंगे कि वस्तुओं और सेवाओं के पर्यावरणीय पहलुओं के कारण प्रभाव न्यूनतम है।  
Contractors/suppliers shall ensure that impact due to the environmental aspects of goods and services is minimum.
- गतिविधि के दौरान उत्पन्न अपशिष्ट को प्रभारी अभियंता द्वारा दिए गए निर्देशों के अनुसार अपशिष्ट उपचार संयंत्र में भेजा जाना है।  
Effluent generated during the activity is to be routed to effluent treatment plant as per the instructions given by the Engineer-in-Charge.
- गतिविधि के दौरान उत्पन्न खतरनाक अपशिष्ट का निपटान प्रभारी अभियंता द्वारा दिए गए निर्देशों के अनुसार खतरनाक अपशिष्ट (प्रबंधन और हैंडलिंग) नियमों के अनुसार किया जाना है।  
Hazardous waste generated during the activity is to be disposed in accordance with Hazardous Waste (Management & Handling) Rules as per the instructions given by the Engineer-in-Charge.

- अन्य सभी ठोस कचरे का निपटान प्रभारी अभियंता द्वारा दिए गए निर्देशों के अनुसार किया जाना है।  
All other solid wastes are to be disposed as per the instructions given by the Engineer-in-Charge.
- पर्यावरण पर प्रभाव को कम करने के लिए रिसाव और स्पिल से बचें। किसी भी रिसाव / स्पिल के मामले में तुरंत प्रभारी अभियंता को उचित सुधारात्मक कार्रवाई करने के लिए सूचित करें।  
Avoid leaks and spills to minimise the impact on environment. In the case of any leaks/spills immediately inform Engineer-in-Charge to take appropriate corrective action.
- यदि संभाली गई वस्तु खतरनाक श्रेणी में आती है, तो कृपया सुनिश्चित करें कि:  
If the item handled falls under hazardous category, please ensure that:
  - क. खेप के साथ एमएसडीएस /टीआरईएम कार्ड आदि सहित उत्पाद साहित्य।  
a. Product literature including MSDS/TREM Card etc. accompany the consignment.
  - ख खतरनाक रसायनों के विनिर्माण, भंडारण और आयात संबंधी नियमों की आवश्यकता के अनुसार पैकिंग और लेबलिंग होंगे।  
b. Packing and labeling are in accordance with the requirement of Manufacture, Storage & Import of Hazardous Chemicals Rules.

#### 7. ख सीमित क्षेत्र प्रवेश B. Confined Space Entry

यदि एक सीमित स्थान में प्रवेश (जैसे स्तंभों में प्रवेश के अंदर, हीट एक्सचेंजर शेल, वेसल्स, फिल्टर, स्फियर, बुलेट्स, बॉयलर आदि) कार्य का एक हिस्सा है, ठेकेदार को प्रत्येक बार उद्देश्य के लिए रखे गए रजिस्टर में नाम और अन्य विवरण दर्ज करना चाहिए। सभी सुरक्षा विनियमन का पालन किया जाना चाहिए और सीमित स्थान में प्रवेश करने से पहले प्राप्त करने की अनुमति दी जानी चाहिए। इसके अलावा, सीमित स्थान से बाहर आने के बाद, कार्यकर्ता/पर्यवेक्षक को हर बार बिना किसी असफलता के प्रभारी अभियंता-को रिपोर्ट करना पड़ता है। किसी भी मामले में इस रजिस्टर में किसी भी विचलन की अनुमति नहीं दी जाएगी।

If entry into a confined space (like inside entry to columns, heat exchanger shells, vessels, filters, spheres, bullets, boilers etc.) is a part of the work, contractor should register the name and other details in the register kept for the purpose each time. All safety regulation has to be adhered and permit to be obtained before entering into a confined space. Also after coming out from the confined space, the worker/supervisor has to report to the Engineer-in-Charge each time without fail. Any deviation in this register will not be permitted in any case.

**संलग्नक- ख ANNEXURE - B**

**श्रम कानून- जांच सूची LABOUR LAWS – CHECK LIST**

**1. ठेका श्रम (विनियमन और उन्मूलन) अधिनियम - 1970**  
**Contract Labour (Regulation & Abolition) Act – 1970**

ठेकेदार के पास श्रम लाइसेंस होना चाहिए यदि वह किसी विशेष नौकरी के लिए एक समय में 19 से अधिक श्रमिकों को नियुक्त करता है।

Contractor should possess Labor License if he engages more than 19 workers at a time for a particular job.

**2. ईएसआई अधिनियम 1948 ESI Act 1948**

एक श्रमिक जिसकी मजदूरी (ओवरटाइम मजदूरी को छोड़कर) रु .21,000/- प्रति माह से अधिक नहीं है, अधिनियम के तहत कवर किया जाएगा। कृपया ध्यान दें कि श्रमिकों को निम्नलिखित प्रक्रियाओं को पूरा करने के बाद ही कारखाने के परिसर / टाउनशिप के अंदर काम करने की अनुमति दी जा सकती है:

A worker whose wages (excluding Overtime Wage) does not exceed Rs.21,000/- per month will be covered under the Act. Please note that workers can be allowed to work inside the Factory Premises / Township only after completing the following procedures:

क. ईएसआई के तहत पहले से पंजीकृत श्रमिकों को एक प्रति के साथ अपना ईएसआई कार्ड जमा करना चाहिए।

a. Those labourers already registered under ESI should submit their ESI card along with a copy.

बी. नए मामलों के लिए, अधिनियम के तहत पंजीकरण के लिए निम्नलिखित दस्तावेजों का प्रस्तुत किया जाना है:

b. For new cases, the following documents are to be produced for registering under the Act:

1. संबंधित कर्मचारी द्वारा विधिवत भरा गया पंजीकरण प्रपत्र।

Registration form duly filled in by the worker concerned.

2. पहचान का प्रमाण-पता और आयु (एसएसएलसी/जन्म प्रमाण पत्र/ड्राइविंग लाइसेंस/पासपोर्ट, आदि)

Proof of identity – Address and Age (SSLC / Birth Certificate / Driving License / Passport, etc.)

3. पारिवारिक फोटोग्राफ - 2 नंबर Family photograph – 2 Nos.

सी. उन श्रमिकों के लिए जिनकी मजदूरी 21,000 / - रुपये प्रति माह से अधिक होने का दावा किया जाता है, उन्हें निम्नलिखित दस्तावेज प्रस्तुत करने चाहिए:

c. For those workers whose wages is claimed to be more than Rs.21,000/- per month should produce the following documents:

1. अपने नियोक्ता से एक वचन पत्र कि उसका वेतन रु. 21,000/- प्रति माह से अधिक है और उसे ईएसआई अधिनियम के तहत कवर करने की आवश्यकता नहीं है।

An undertaking from his employer that his wage is more than Rs.21,000/- per month and he is not required to be covered under ESI Act is to be submitted.

2. व्यक्तिगत दुर्घटना नीति की एक प्रति जिसमें दिखाया गया है कि कार्यकर्ता नीति के तहत कवर किया गया है।

A copy of the Personal Accident Policy showing that the worker is covered under the policy.

**3. ईपीएफ और एमपी अधिनियम - 1952 The EPF & MP Act – 1952**

क. संबंधित कामगार को नामांकन फार्म भरना होगा

a. The concerned worker has to file nomination form

ख. यदि पहले से ही अधिनियम और योजना के तहत कवर किया गया है, तो संबंधित दस्तावेज प्रस्तुत किया जाना है

b. If already covered under the Act and Scheme, the related document to be submitted.

**4. अंतरराज्यीय प्रवासी कामगार (नियोजन और सेवा की शर्तों का विनियमन) अधिनियम 1979  
Interstate Migrant Workmen (Regulation of Employment and Conditions of Service) Act 1979**

ठेकेदार के पास इस अधिनियम के तहत लाइसेंस होना चाहिए, यदि वह किसी भी दिन 05 या अधिक अंतरराज्यीय प्रवासी कामगारों को नियुक्त करता है।

The contractor should possess License under this Act, if he engages 05 or more interstate migrant workmen on any day.

**संलग्नक- ग ANNEXURE - C**

**सुरक्षा, स्वास्थ्य और पर्यावरण (एसएचई) स्थितियां**  
**SAFETY, HEALTH & ENVIRONMENT (SHE) CONDITIONS**

निम्नलिखित सुरक्षा, स्वास्थ्य और पर्यावरण की स्थिति ठेकेदार पर लागू होगी जो एचओसीएल, अंबलमुगल में काम कर रहे हैं।

The following Safety, Health and Environment conditions shall apply to the Contractor those who are working at HOCL, Ambalamugal.

- प्रभावी और कुशल एसएचई प्रबंधन के लिए साइट पर योग्य और अनुभवी कर्मियों की उपलब्धता और उपयुक्तता सुनिश्चित करेगा।  
Shall ensure the availability and suitability of qualified and experienced personnel at the site for effective and efficient SHE management.
- यह सुनिश्चित करेगा कि उपकरण, सामग्री, उपभोग्य वस्तुएं आवश्यकताओं के अनुरूप हैं।  
Shall ensure that the equipment, materials, consumables are in conformity with the requirements.
- यह सुनिश्चित करेगा कि उपयोग किए जाने वाले सभी उपकरणों/मचान में पर्याप्त स्थिरता हो।  
Shall ensure that all equipments/scaffolding used are having adequate stability.
- यह सुनिश्चित करेगा कि इसमें शामिल कर्मियों द्वारा उपयुक्त और पर्याप्त पीपीई प्रदान किए जाते हैं और पहने जाते हैं।  
Shall ensure that appropriate and adequate PPEs are provided and worn by the personnel involved.

- यह सुनिश्चित करेगा कि आवश्यकतानुसार गतिविधि/खतरे के लिए उपयुक्त सुरक्षा संकेत रखे गए हैं।  
Shall ensure that safety signs are posted as appropriate to the activity/hazard as required.
- साइट से सामग्री को हटाना सुनिश्चित करेगा, जो आवश्यकताओं के अनुरूप नहीं है।  
Shall ensure the removal of material from site, which do not conform to the requirements.
- यह सुनिश्चित करेगा कि गतिविधियों के कारण पर्यावरण पर कोई प्रतिकूल प्रभाव न हो ।  
Shall ensure no adverse impact on environment due to activities.
- अपने कर्मचारी की गतिविधियों पर उचित करीबी पर्यवेक्षण बनाए रखेगा।  
Shall maintain proper close supervision over their employee's activities.
- निष्पादित किए जा रहे कार्य की प्रकृति से संबंधित खतरों की पहचान करेगा और उन खतरों को खत्म करने / नियंत्रित करने के तरीके विकसित करेगा जहां किसी भी अवांछित घटना / दुर्घटना को रोकने के लिए आवश्यक है।  
Shall identify the hazards related to their nature of work being executed and develop methods to eliminate/control those hazards where required to prevent any unwanted incidents/accident.
- पूरे काम के दौरान श्रमिकों को शिक्षित / प्रशिक्षित करेगा और उनकी एसएचई जागरूकता में सुधार करेगा।  
Shall educate/train the workers throughout the work and improve their SHE awareness.
- पर्याप्त स्वच्छता सुनिश्चित करेगा, (अर्थात स्वच्छता, धूल और धुएं से मुक्त वातावरण, उचित रोशनी, ठेकेदार द्वारा नियोजित सभी श्रमिकों को और पीने का पानी)।  
Shall ensure adequate hygiene, (i.e. cleanliness, environment free from dust and fume, proper lighting and drinking water to all worker employed by the contractor).
- यह सुनिश्चित करेगा कि नियमित जांच/निरीक्षण करके निम्नलिखित के लिए नियमित नियंत्रण हैं, लेकिन निम्नलिखित तक सीमित नहीं हैं:  
Shall ensure regular controls are in place for the following by doing regular checks/inspections but not limited to the following:
  - वाहन और उपकरण Vehicles & equipments
  - टूल्स, उपकरण और लिफ्टिंग उपस्कर Tools, equipments, lifting appliances
  - सुरक्षा उपकरण Safety equipments
  - फायर संरक्षण Fire protection
- समय-समय पर अपने खर्च पर और जब भी आवश्यक हो अपने कार्य क्षेत्र से निर्दिष्ट क्षेत्र में सभी कूड़े/स्क्रेप/अवांछित सामग्री को साफ करेगा और हटा देगा।  
Shall at his own expenses from time to time and whenever required clear away and remove all rubbish/scrap/unwanted materials from its work area to designated area.
- यदि कार्य से जुड़कर होने वाली सभी घटनाओं/दुर्घटनाओं की रिपोर्ट करेगा। ठेकेदार स्वामी के सुरक्षा विभाग को एक घटना / दुर्घटना रिपोर्ट तैयार करेगा और प्रस्तुत करेगा।  
Shall report all incidents/accidents occurring if any connected with the job. The Contractor shall prepare and submit an incident/accident report to OWNER's Safety Department.

संलग्नक-घ ANNEXURE - D

**काली सूची/अवकाश सूचीकरण की घोषणा का प्रोफार्मा**  
**PROFORMA OF DECLARATION OF BLACK LISTING/HOLIDAY LISTING**

**मालिकाना संस्था के मामले में In the case of a Proprietary Concern:**

मैं एतद्वारा घोषणा करता हूँ कि न तो मैं अपने व्यक्तिगत नाम पर और न ही अपनी मालिकाना संस्था के नाम पर मैसर्स \_\_\_\_\_ जो न तो संलग्न बोली/निविदा प्रस्तुत कर रहा है और न ही कोई अन्य संस्था जिसमें मैं मालिक हूँ और न ही कोई साझेदारी फर्म जिसमें मैं एक प्रबंध भागीदार के रूप में शामिल हूँ, को किसी भी सरकारी सार्वजनिक क्षेत्र की कंपनी (सीपीएसयू) या किसी भी प्रशासनिक मंत्रालय द्वारा घोषित काली सूची या अवकाश सूची में रखा गया है, सिवाय इसके कि नीचे दर्शाया गया है:

I hereby declare that neither I in my personal name or in the name of my Proprietary concern M/s. \_\_\_\_\_ which is submitting neither the accompanying Bid/Tender nor any other concern in which I am proprietor nor any partnership firm in which I am involved as a Managing Partner have been placed on black list or holiday list declared by any Government Public Sector company (CPSU) or any of the administrative ministries, except as indicated below:

(यहां ब्लैकलिस्टिंग या हॉलिडे लिस्टिंग का विवरण दें, और वहां राज्य की अनुपस्थिति में "शून्य")  
(Here give particulars of blacklisting or holiday listing, and in absence there of state "NIL")

**साझेदारी फर्म के मामले में In the case of a Partnership Firm:**

हम एतद्वारा घोषणा करते हैं कि न तो हम, मैसर्स \_\_\_\_\_, साथ में बोली / निविदा प्रस्तुत करना और न ही उक्त फर्म के प्रबंधन में शामिल कोई भागीदार या तो उसकी व्यक्तिगत क्षमता में या किसी फर्म या संस्था के मालिक या प्रबंध भागीदार के रूप में किसी भी सरकारी सार्वजनिक क्षेत्र की कंपनी (सीपीएसयू) या किसी भी प्रशासनिक मंत्रालय द्वारा घोषित ब्लैकलिस्ट या हॉलिडे सूची में रखा गया है, सिवाय इसके कि नीचे दर्शाया गया है:

We hereby declare that neither we, M/s. \_\_\_\_\_, submitting the accompanying Bid/Tender nor any partner involved in the management of the said firm either in his individual capacity or as proprietor or managing partner of any firm or concern have or has been placed on blacklist or holiday list declared by any Government Public Sector Company (CPSU) or any of the administrative ministries, except as indicated below:

(यहां ब्लैकलिस्टिंग या हॉलिडे लिस्टिंग का विवरण दें, और वहां राज्य की अनुपस्थिति में "शून्य")  
(Here give particulars of blacklisting or holiday listing, and in absence there of state "NIL")

**कंपनी के मामले में In the case of Company:**

हम एतद्वारा घोषणा करते हैं कि हमें किसी भी सरकारी सार्वजनिक क्षेत्र की कंपनी (सीपीएसयू) या किसी भी प्रशासनिक मंत्रालय द्वारा घोषित किसी भी अवकाश सूची या काली सूची में नहीं रखा गया है, सिवाय इसके कि नीचे दर्शाया गया है:

We hereby declare that we have not been placed on any holiday list or black list declared by any Government Public Sector Company (CPSU) or any of the administrative ministries, except as indicated below:

(यहां ब्लैकलिस्टिंग या हॉलिडे लिस्टिंग का विवरण दें, और वहां राज्य की अनुपस्थिति में "शून्य")  
(Here give particulars of blacklisting or holiday listing, and in absence there of state "NIL")

यह समझा जाता है कि यदि यह घोषणा किसी विशेष रूप से झूठी पाई जाती है, तो हिंदुस्तान ऑर्गेनिक केमिकल्स लिमिटेड या उसके प्रशासनिक मंत्रालय को मेरी/हमारी बोली को अस्वीकार करने का अधिकार होगा, और यदि बोली के परिणामस्वरूप ठेका हुआ है, तो ठेके समाप्त होने के लिए उत्तरदायी है।

It is understood that if this declaration is found to be false in any particular, Hindustan Organic Chemicals Limited or its Administrative Ministry, shall have the right to reject my/our bid, and if the bid has resulted in a contract, the contract is liable to be terminated.

स्थान PLACE:

दिनांक DATE:

बोलीदाता के हस्ताक्षर SIGNATURE OF THE BIDDER

निविदा संख्या \_\_\_\_\_ के विरुद्ध बोली लगाने के लिए अनुलग्नक

ANNEXURE TO BID AGAINST TENDER NO \_\_\_\_\_

(कृपया इस शीट को भरें और वाणिज्यिक/तकनीकी बोली में जमा करें

KINDLY FILL THIS SHEET AND SUBMIT IN COMMERCIAL/TECHNICAL BID)

बोलीदाता का नाम Name of Bidder: .....		
क्र सं Sr. No.	वाणिज्यिक खंड Commercial Clauses	बोलीदाता की पुष्टि Bidder Confirmation (कृपया अपनी पुष्टि के आगे √ लगाएँ Please put √ in front of your confirmation)
1	क्या बोलीदाता (मालिकाना संस्था/साझेदारी फर्म/कंपनी) वर्तमान में अवकाश सूची/काली सूची/डी-लिस्टेड में है या किसी सार्वजनिक क्षेत्र के उपक्रम/सरकारी संगठन में अवकाश सूची/काली सूची/डी-लिस्टेड में रखा गया है। यदि हाँ, तो विवरण दें। Whether bidder (a proprietary concern, Partnership Firm, Company) is currently on holiday list/black list/de-listed or has been put on holiday/blacklisted/de-listed at any PSU/govt. Organization. If so, give details.	<input type="checkbox"/> हाँ, हम अवकाश सूची/काली सूची/डी-सूची में हैं Yes, We are on holiday List/Black List/De-List <input type="checkbox"/> नहीं No
2i	क्या पार्टी सूक्ष्म/लघु/मध्यम उद्यम अधिनियम 2006 के तहत पंजीकृत है (कृपया प्रमाण प्रस्तुत करें) Whether the party is registered under Micro/Small/Medium Enterprises act 2006 (Please furnish the proof)	<input type="checkbox"/> हाँ yes <input type="checkbox"/> नहीं No
2ii	एमएसई बोलीदाता की स्थिति Status of MSE Bidder	<input type="checkbox"/> विनिर्माता Manufacturer <input type="checkbox"/> सेवाएं Services <input type="checkbox"/> लागू नहीं Not Applicable
2iii	क्या एमएसई बोलीदाता अपने द्वारा निर्मित उत्पाद की पेशकश कर रहा है Whether MSE bidder is offering product manufactured by him/her	<input type="checkbox"/> हाँ Yes <input type="checkbox"/> नहीं No
3i	सभी एमएसई बोलीदाता सीपीपी पोर्टल पर अपना यूएम नंबर पंजीकृत/घोषित करेंगे और इस पंजीकरण/घोषणा की प्रति प्रस्ताव के साथ संलग्न की जाएगी; ऐसा न करने पर ऐसे बोलीदाता एमएसएमई आदेश, 2012 के लिए पीपी नीति के अनुसार लाभ का आनंद नहीं ले पाएंगे। All MSE bidders shall register / declare their UAM Number on CPP Portal and copy of this registration / declaration shall be attached with the offer; failing which such bidders will not be able to enjoy benefits as per PP Policy for MSME order, 2012. एसएसआई/एमएसएमई/एनएसआईसी/यूएम/डीआईसी पंजीकरण प्रमाणपत्र SSI/MSME/NSIC/UAM /DIC registration certificate	<input type="checkbox"/> यूएम नंबर सूचित करें Mention UAM Number <input type="checkbox"/> लागू नहीं Not Applicable
3 ii	खंड संख्या 3i के विरुद्ध वैध दस्तावेज प्रस्तुत किया गया Submitted valid document against clause no 3i	<input type="checkbox"/> प्रस्तुत Submitted <input type="checkbox"/> लागू नहीं Not Applicable

4i	<p>क्या "एमएसएमई" उद्यम का मालिक एससी/एसटी श्रेणी से है (कृपया सक्षम प्राधिकारी द्वारा जारी जाति प्रमाण पत्र संलग्न करें) <b>Whether the proprietor of "MSME" enterprise is from SC/ST category (Please attach caste certificate issued by competent authority)</b></p>	<input type="checkbox"/> हाँ Yes  <input type="checkbox"/> नहीं No
4ii	<p>क्या "एमएसएमई" उद्यम की मालिक महिला है (अर्थात महिला स्वामित्व, या साझेदारी/निजी लिमिटेड कंपनियों के मामले में न्यूनतम 51% शेयर धारण करना) <b>Whether the proprietor of "MSME" enterprise is woman (i.e. Woman proprietorship, or holding minimum 51% shares in case of Partnership/Private Limited Companies)</b></p>	<input type="checkbox"/> हाँ Yes  <input type="checkbox"/> नहीं No
4iii	<p>खंड संख्या 4ii के विरुद्ध प्रस्तुत प्रमाण पत्र <b>Submitted certificate against clause no 4ii</b></p>	<input type="checkbox"/> प्रस्तुत Submitted <input type="checkbox"/> लागू नहीं Not Applicable
5	<p><b>पूछताछ के सभी नियमों और शर्तों से सहमत:</b> <b>AGREED TO ALL TERMS AND CONDITIONS OF ENQUIRY:</b> एतद्वारा यह बताया जाता है कि प्रस्तुत कोटेशन/प्रस्ताव, पूछताछ के लिए जारी किए गए दस्तावेजों के पूर्णतः अनुरूप है और यह भी पुष्टि की जाती है कि पूछताछ के अनुसार सभी नियमों व शर्तों में कोई विचलन नहीं है। पूछताछ दस्तावेजों में उल्लिखित एचओसीअल के मानक नियमों व शर्तों को अस्वीकार करने या उनसे विचलन करने पर प्रस्ताव अस्वीकृत किया जा सकता है, स्पष्टीकरण के लिए कोई पत्राचार नहीं किया जाएगा। <b>It is hereby stated that the quotation/offer submitted is in full compliance with the documents issued against the enquiry and also further confirmed that there is no deviation from all the terms and conditions as per the enquiry. Non-acceptance or deviation to HOCL's standard terms and conditions mentioned in enquiry documents may lead to rejection of offer, no correspondence shall be done for clarifications</b></p>	<input type="checkbox"/> सहमत Agreed  <input type="checkbox"/> असहमत Not Agreed

दिनांक DATE:

हस्ताक्षर और बोलीदाता का मोहर SIGN AND STAMP OF BIDDER

**ANNEXURE – H**

**BID SECURITY DECLARATION**

**ANNEXURE TO BE SUBMITTED ALONG WITH THE BID AGAINST TENDER  
NO \_\_\_\_\_**

**I/We.....hereby declare that:**

- 1. I will not revoke the tender within the stipulated period/ validity period OR increase the quoted rates.**
- 2. I will commence the work on intimating to start the work/ on receipt of Letter of Indent.**
- 3. I will not withdraw or amend the tender or impair or derogate from the tender in any respect within the period of validity of the tender.**
- 4. I will furnish the required performance security within the specified period.**

**NAME AND ADDRESS OF THE BIDDER**

**PLACE:**

**DATE:**

**SIGNATURE AND STAMP OF THE BIDDER**

**Annexure - R**

**Declaration of Compliance of Order (Public Procurement No.1, 2 & 3) dtd 23 Jul 2020 & 24 Jul 2020 on Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017**

This declaration must form part of all tenders & it contains general information and serves as a declaration form for all bidders. (Before completing this declaration, bidders must study the General Conditions, Definitions, Govt Directives applicable in respect of Public Procurement No.1, 2 & 3) dtd 23 Jul 2020 & 24 Jul 2020 on Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017& prescribed tender conditions).

**DECLARATION BY AUTHORISED SIGNATORY OF THE FIRM**

I, the undersigned,..... (full names), do hereby declare, in my capacity as ..... of M/s .....(name of bidder entity), that:

1. The facts contained herein are within my own personal knowledge.
2. I have read the Order (Public Procurement No.1, 2 & 3) dtd 23 Jul 2020 & 24 Jul 2020 on the subject of Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017 regarding restrictions on procurement from a bidder of a country which shares a land border with India and comply to all the provisions of the Order.
3. I certify that M/s .....(name of bidder entity) is not from such a country or, is from such a country (strike out whichever is not applicable), has been registered with the Competent Authority. I further certify that M/S.....(name of the sub-contractor if any) is not from such a country or, is from such a country (strike out whichever is not applicable), has been registered with the Competent Authority. I hereby certify that this SUPPLIER fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority is attached].
4. I understand that the submission of incorrect data and / or if certificate / declaration given by M/s .....(name of bidder entity) is found to be false, this would be a ground for immediate termination and further legal action in accordance with law as per Clause 12 of the Public Order on Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017.

AUTHORISED SIGNATURE:

DATE: \_\_\_\_\_

Seal / Stamp of Bidder

## **ANNEXURE - S**

### **INSTRUCTIONS TO THE CONTRACTORS FOR USE OF VEHICLES**

#### **INSTRUCTIONS TO THE CONTRACTORS FOR USE OF VEHICLES, LIFTING MACHINES, LIFTING TOOLS & TACKLES, EARTH MOVING EQUIPMENT AND ENGINE OPERATED EQUIPMENT**

##### **1. Lifting machines, chains ropes and lifting tackles**

Contractor shall possess valid certificates, for lifting machines, chains blocks, ropes, slings, Dshackles, belts and other lifting tools & tackles used for working inside HOCL, Ambalamugal.

##### **2. Insurance for special type vehicles**

Contractor shall possess valid certificates, for vehicles which are used for working inside HOCL, Ambalamugal.

##### **3. Driving License**

The Driver / Operator shall possess relevant valid certificates, for vehicles which are used for working inside HOCL, Ambalamugal.

##### **4. Certificate of Fitness**

Contractor shall possess valid certificates, for transport vehicles which are used for working inside HOCL, Ambalamugal.

##### **5. Vehicle Entry Permit**

Vehicle entry permit shall be taken for use of Mobile equipment inside plant area.

##### **6. Spark Arrestor**

Spark arrestor shall be provided for all vehicles / engine operated equipment which are used for working inside plant area.

#### **NOTE:**

**1. The vehicle / mobile equipment brought inside HOCL premises shall be maximum 10 years from the date of registration.**

**2. Spark ignited equipment (including petrol driven engines) are not permitted inside PESO Licensed area.**

Please note that Mobile Lifting Machines like Mobile cranes, Fork lift, Manlift, Dozers and Excavator shall be allowed to work inside the Factory Premises only after verifying the following:

##### **I. For Mobile Cranes**

Shall ensure regular controls are in place for the following by doing regular checks / inspections but not limited to the following:

- a. RTO license for operating crane available

- b. Record of eye examination / re-examination carried out as per Kerala factories Rules 1957
- c. Availability of load chart inside operator cabin in such a way that operator can read and understand load chart.
- d. Condition of hook and latch.
- e. Condition of wire ropes / slings.
- f. Condition of over hoist limit switch (Anti two blocks) and overload alarm.
- g. SWL marked on all hooks.
- h. Tyre condition.
- i. Third party inspection certificate of crane and lifting tools and equipment.
- j. Condition of Horn & Reverse horn.
- k. Condition in hydraulic cylinders and outriggers.
- l. Guards in moving and rotating parts.
- m. Availability of Safe Load indicator (SLI) in operator cabin.

## **II. For Fork Lift**

Shall ensure regular controls are in place for the following by doing regular checks / inspections but not limited to the following:

- a. RTO License for operating Excavator.
- b. Condition of Fork.
- c. Condition in hydraulic cylinders for any leakage.
- d. Tyre condition.
- e. Condition of Horn & Reverse horn.
- f. Condition of overhead guard.

## **III. For Man Lift**

Shall ensure regular controls are in place for the following by doing regular checks / inspections but not limited to the following:

- a. RTO license for operating crane available
- b. Record of eye examination / re-examination carried out as per Kerala factories Rules 1957
- c. Condition of Platform and guard rails.
- d. Condition of main boom and tip boom.
- e. Tyre condition.
- f. Third party inspection certificate of crane and lifting tools and equipment
- g. Condition of Horn & Reverse horn.
- n. Condition in hydraulic cylinders and outriggers.

#### **IV. For Excavator / Dozer**

Shall ensure regular controls are in place for the following by doing regular checks / inspections but not limited to the following:

- a. RTO License for operating Excavator.
- b. Condition of Loader bucket.
- c. Condition of Boom.
- d. Hydraulic oil level.
- e. Condition in hydraulic cylinders for any leakage.
- f. Tyre condition.
- g. Condition of Horn & Reverse horn.
- h. Condition of backhoe pins and bushings.
- i. Condition of swing tower.

**ANNEXURE – W**  
**FORM OF DECLARATION ALONG WITH SUBMISSION OF TENDER**

**From**

---

To

**HINDUSTAN ORGANIC CHEMICALS LTD**  
**Ambalamugal**

1. I/We hereby declare that, for execution WORK of \_\_\_\_\_ as per Tender / NIT / RFQ No. \_\_\_\_\_, Date: \_\_\_\_\_, I / We have read, understood and agree to the scope of work, time schedule for completion of work. Period of contract, General Conditions of Contract, Special Conditions of Contract, Payment Terms, Specifications for materials and workmanship, Drawings, and other Documents and papers, all as detailed in the Tender Documents at the Schedule of Rates / Amount quoted by me / us for the above WORK in accordance with the above Tender / NIT / RFQ.
2. It has been explained to me / us that the time stipulated for completion of WORK in all respects and indifferent stages mentioned in the 'Time Schedule' of completion of WORK and signed and accepted by me / us is the essence of the CONTRACT. I / We agree that in case of failure on my / our part, to strictly observe the Time of Completion mentioned for WORK or any of them and to the final completion of WORK in all respects according to the Schedule set out in the said 'Time Schedule' of completion of WORK, and I / We agree fully to the recovery being made as specified (including Liquidated Damages clause) in the above Tender / NIT / RFQ.
3. I / We agree to pay the Earnest Money and Security Deposit and accept all the Terms and Conditions laid down in the Tender / NIT / RFQ in this respect.
4. In the case of acceptance of this tender, I / We hereby agree to abide by and full fill all Terms and Conditions of above Tender / NIT / RFQ and in default thereof, to forfeit and pay to HOCL such sums of money as are stipulated In Condition contained In General Tender Notice and Tender Documents.
5. If, I / We fail to commence the WORK specified in the Tender / NIT / RFQ, or I / We fail to deposit the amount of Security Deposit specified In Tender / NIT / RFQ, I / We agree that HOCL without prejudice to any other right or remedy be at liberty to forfeit the said Earnest Money in full, otherwise the said Earnest Money shall be retained by HOCL towards the Security Deposit specified in the Tender / NIT / RFQ. HOCL shall be at liberty to cancel the Tender / NIT / RFQ, if I / We fail to deposit the Security Amount as aforesaid or to execute an Agreement or to start WORK as stipulated In the Tender / NIT / RFQ Document.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

Signature of tenderer(s) with seal of the firm



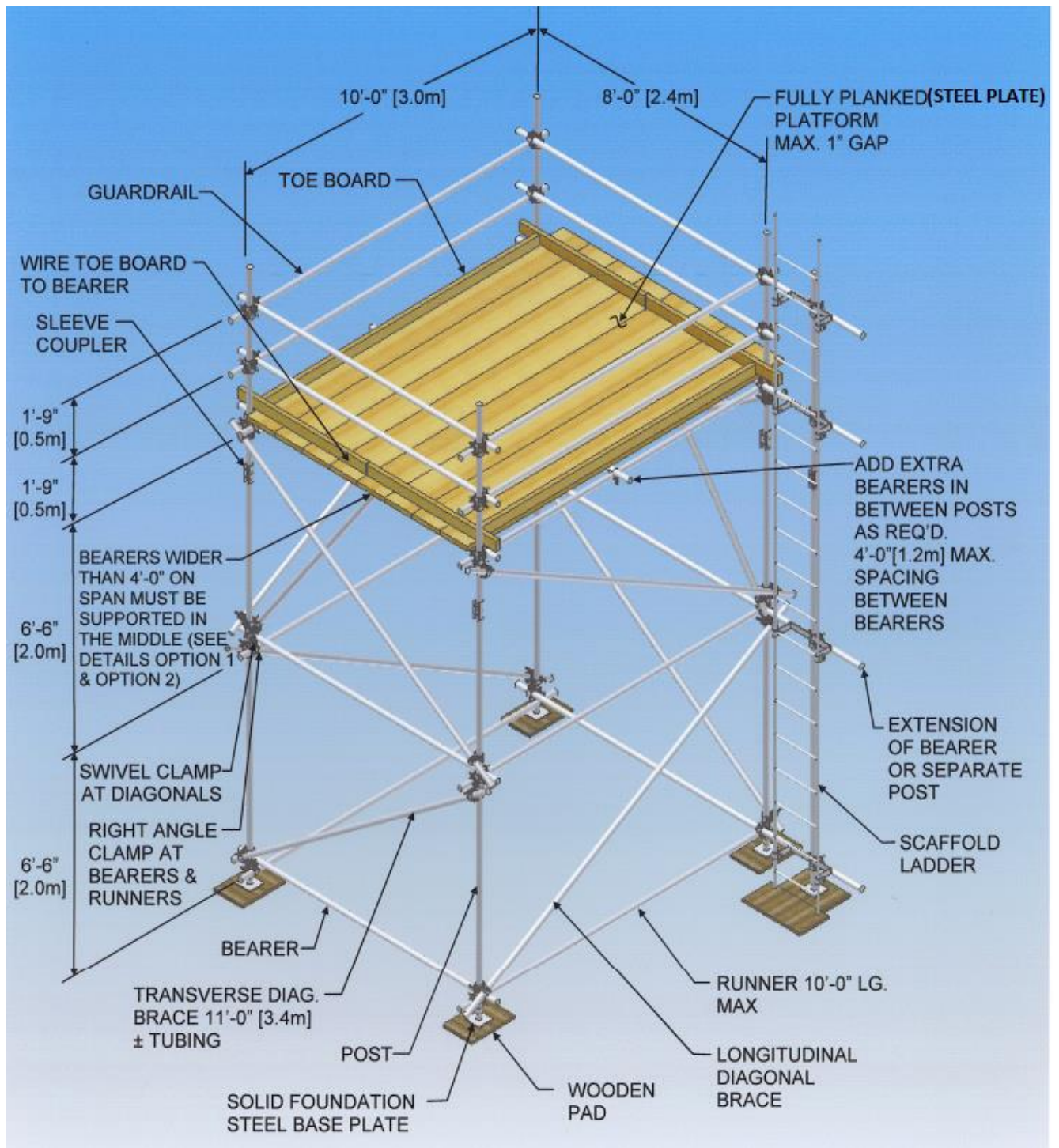
**HINDUSTAN ORGANIC CHEMICALS LIMITED**  
**SCAFFOLD CHECKLIST**

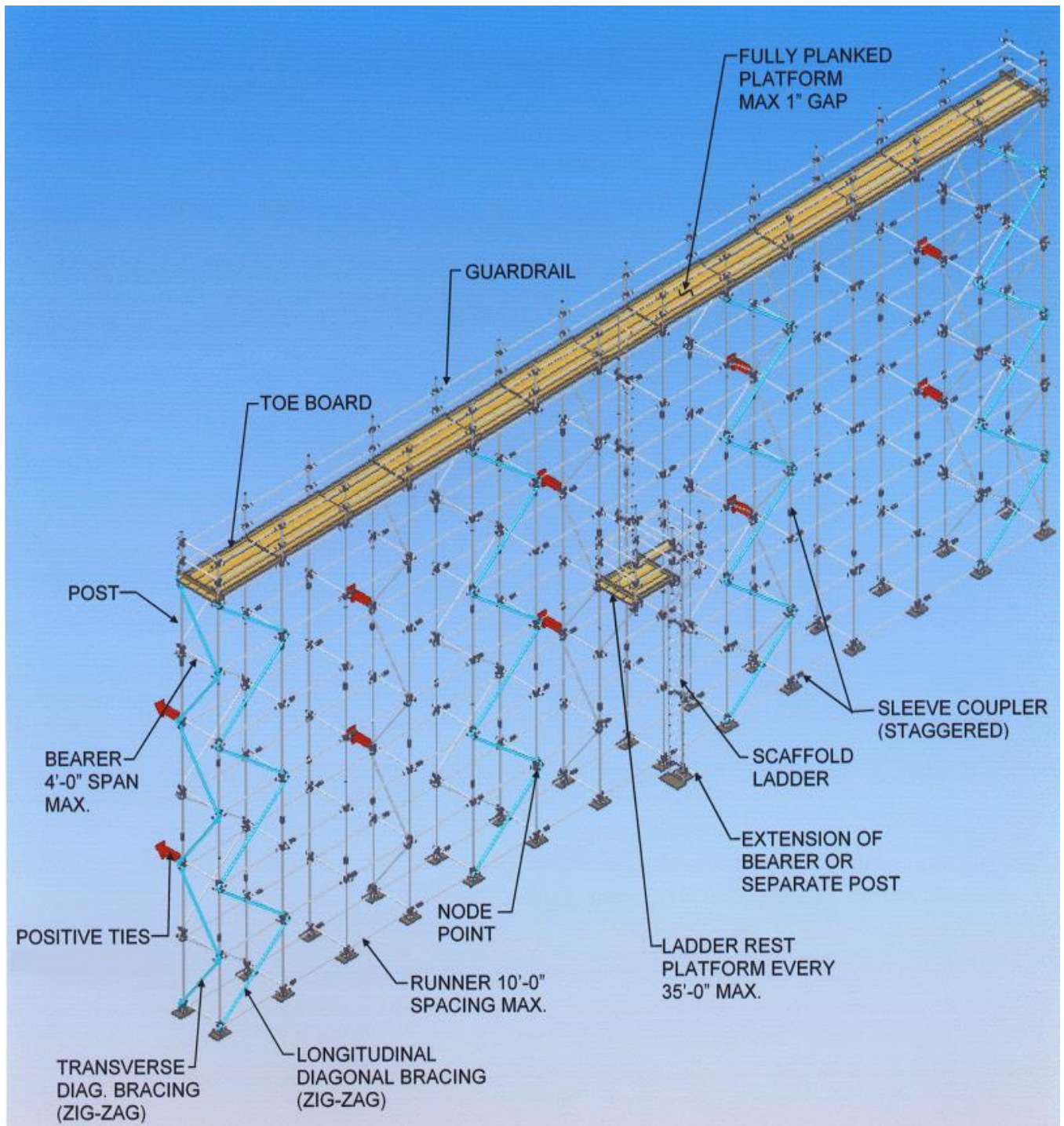
Location (Plant):		Purpose of Scaffold:		Erected by (Dept./Contractor):	
PARTS	POINTS TO BE CHECKED	✓	REMARKS		
Sill plate	Provided on loose ground				
Base plate	5" base plate/24" extension base plate/24" screw jack				
	Caster wheels with brake for mobile scaffold				
	Swivel base plate for uneven or angled surface				
Tubes	Uniform/Proper size				
	Straight				
Standard (Post)	Staggered joints (adjacent standards are not joined within the same lift level to prevent tipping)				
	Sleeve couplers (to join two standards (tube type) end to end)				
	Vertical				
Ledger (Runner)	Staggered joints				
	Level				
	Not damaged				
	Bearer placed on top of Ledger				
Bracing	Longitudinal diagonal bracing				
	Transverse diagonal bracing				
	Bracing repeated at every 5 <sup>th</sup> post				
Ladders	Proper angle (75°) or 1:4 base to height ratio				
	Right length				
	Properly secured/Ladder clamp				
	Separate landing				
	Right extension				
Fittings	Right fittings				
	Not damaged				
	Right angle clamps for Bearer and Ledger (tube type)				
Fall protection	Top rail				
	Mid rail				
	Toe guard (Falling object protection)				
Boards (Steel plates/gratings)	Not damaged				
	Not loose				
	Right support				
Any Other Observation					
Verified By					
<b>Name:</b>		<b>Designation:</b>		<b>Signature</b>	



**HINDUSTAN ORGANIC CHEMICALS LIMITED**

**SCAFFOLDING PARTS AND ERECTION PROCEDURE**







Lay out the mudsills at approximate centers and place base plates on them. The bearer is the name for the tube goes across the scaffold that the boards rest on. The runner goes down the length of the scaffold. Lay these out and stand up the first post. Clamp the runner to the post close to the base. Clamp the bearer on at 90 degrees on top of the runner.



After the first post is upright and runner and bearer attached, the scaffold will be self supporting. Next, attach the other posts at predetermined centers. The bearer always goes on top of the runner for a safety clamp backup effect.



After all four posts are attached, measure the scaffold from inside to inside to insure the corner angles are at 90 degrees (square).



It is a good idea to attach a horizontal diagonal at this time to ensure that the scaffold remains square. Make sure the legs are level and plumb as you go.



After ensuring the first level is properly spaced, square, plumb, and level, you may begin the second level. It is best to have the clamp spacing preset on the horizontal tubes by measuring the spacing with a tape measure. Do not exceed 6'6" to this second level.



Attach the second level bearers and runners. Next, attach the diagonals. Swivel clamps are used to attach these at an approximate 45 degree angle from level to level. All four sides should have diagonal bracing attached.



Put the steel plates/gratings for the second level on the bearers. Once the erector climbs to the second level, he will be exposed to a fall hazard and precautions to be taken



Attach a ladder for access to the second level. Install the guardrails, midrails, and toeboards. Secure the steel plates/gratings to the bearer.



The completed scaffold should be square, rigid, properly diagonally braced, ladders should extend at least to top of handrails, work platforms fully covered with steel plates/gratings, toeboards installed, screening attached where required, guardrails & midrails installed, and all other safety measures met.

#### PARTS



The right angle clamp attaches tubes at 90 degrees.



The swivel clamp attaches tubes at various angles. It is used for diagonal braces.



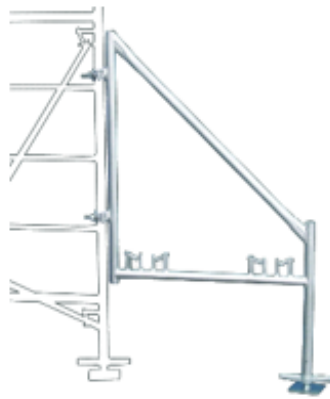
Sleeve Coupler



SCAFFOLD CASTERS  
5"



5" BASE PLATE    SWIVEL BASE PLATE    24" EXTENSION BASE PLATE    24" SCREW JACK W/ BASE PLATE    24" SCREW JACK W/ SOCKET



Outrigger



**HINDUSTAN ORGANIC CHEMICALS LIMITED**

**MANUAL FOR SCAFFOLDING**

## SCAFFOLDING

Scope, application and definitions

**(a) Scope and application.** This applies to all scaffolds used in workplaces. It does not apply to crane or derrick suspended personnel platforms.

### **(b) Definitions.**

**Adjustable suspension scaffold** means a suspension scaffold equipped with a hoist(s) that can be operated by an employee(s) on the scaffold.

**Bearer** (putlog) means a horizontal trans-verse scaffold member (which may be supported by ledgers or runners) upon which the scaffold platform rests and which joins scaffold uprights, posts, poles, and similar members.

**Boatswains' chair** means a single-point adjustable suspension scaffold consisting of a seat or sling designed to support one employee in a sitting position.

**Body belt (safety belt)** means a strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.

**Body harness** means a design of straps which may be secured about the employee in a manner to distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders, with means for attaching it to other components of a personal fall arrest system.

**Brace** means a rigid connection that holds one scaffold member in a fixed position with respect to another member, or to a building or structure.

**Bricklayers' square scaffold** means a supported scaffold composed of framed squares

which support a platform.

**Carpenters' bracket scaffold** means a supported scaffold consisting of a platform supported by brackets attached to building or structural walls.

**Catenary scaffold** means a suspension scaffold consisting of a platform supported by two essentially horizontal and parallel ropes attached to structural members of a building or other structure. Additional support may be provided by vertical pickups.

**Chimney hoist** means a multi-point adjustable suspension scaffold used to provide access to work inside chimneys. (See "Multi-point adjustable suspension scaffold".) **Cleat** means a structural block used at the end of a platform to prevent the platform from slipping off its supports. Cleats are also used to provide footing on sloped surfaces such as crawling boards.

**Competent person** means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

**Continuous run scaffold** (Run scaffold) means a two- point or multi-point adjustable suspension scaffold constructed using a series of interconnected braced scaffold members or supporting structures erected to form a continuous scaffold.

**Coupler** means a device for locking together the tubes of a tube and coupler scaffold.

**Crawling board (chicken ladder)** means a supported scaffold consisting of a steel plates/grating with cleats spaced and secured to provide footing, for use on sloped surfaces such as roofs.

**Deceleration device** means any mechanism, such as a rope grab, rip-stitch lanyard, Specially woven lanyard, tearing or deforming lanyard, or automatic self-retracting lifeline lanyard, which dissipates a substantial amount of energy during a fall arrest or limits the Energy imposed on an employee during fall arrest.

**Double pole (independent pole) scaffold** means a supported scaffold consisting of a platform(s) resting on cross beams (bearers) supported by ledgers and a double row of uprights independent of support (except ties, guys, braces) from any structure.

**Equivalent** means alternative designs, materials or methods to protect against a hazard which the employer can demonstrate will provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the standard.

**Exposed power lines** means electrical power lines which are accessible to employees and which are not shielded from contact. Such lines do not include extension cords or power tool cords.

**Eye or Eye splice** means a loop with or without a thimble at the end of a wire rope.

**Fabricated decking and steel plates/gratings** means manufactured platforms made of metal. **Fabricated frame scaffold (tubular welded frame scaffold)** means a scaffold consisting of a platform(s) supported on fabricated end frames with integral posts, horizontal bearers, and intermediate members.

**Failure** means load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

**Float (ship) scaffold** means a suspension scaffold consisting of a

braced platform resting on two parallel bearers and hung from overhead supports by ropes of fixed length.

**Form scaffold** means a supported scaffold consisting of a platform supported by brackets attached to formwork.

**Guardrail system** means a vertical barrier, consisting of, but not limited to, top rails, midrails, and posts, erected to prevent employees from falling off a scaffold platform or walkway to lower levels.

**Hoist** means a manual or power-operated mechanical device to raise or lower a suspended scaffold.

**Horse scaffold** means a supported scaffold consisting of a platform supported by construction horses (saw horses). Horse scaffolds constructed of metal are sometimes known as trestle scaffolds.

**Independent pole scaffold** (see "Double pole scaffold").

**Interior hung scaffold** means a suspension scaffold consisting of a platform suspended from the ceiling or roof structure by fixed length supports.

**Ladder jack scaffold** means a supported scaffold consisting of a platform resting on brackets attached to ladders.

**Ladder stand** means a mobile, fixed-size, self-supporting ladder consisting of a wide flat tread ladder in the form of stairs.

**Landing** means a platform at the end of a flight of stairs.

**Large area scaffold** means a pole scaffold,

tube and coupler scaffold, systems scaffold, or fabricated frame scaffold erected over substantially the entire work area. For example: a scaffold erected over the entire floor area of a room.

**Lean-to scaffold** means a supported scaffold which is kept erect by tilting it toward and resting it against a building or structure.

**Lifeline** means a component consisting of a flexible line that connects to an anchorage at one end to hang vertically (vertical lifeline), or that connects to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

**Lower levels** means areas below the level where the employee is located and to which an employee can fall. Such areas include, but are not limited to, ground levels, floors, roofs, ramps, runways, excavations, pits, tanks, materials, water, and equipment.

**Masons' adjustable supported scaffold** (see "Self-contained adjustable scaffold"). **Masons' multi-point adjustable suspension scaffold** means a continuous run suspension scaffold designed and used for masonry operations.

**Maximum intended load** means the total load of all persons, equipment, tools, materials, transmitted loads, and other loads reasonably anticipated to be applied to a scaffold or scaffold component at any one time.

**Mobile scaffold** means a powered or unpowered, portable, caster or wheel-mounted supported scaffold.

**Multi-level suspended scaffold** means a two-point or multi-point adjustable suspension scaffold with a series of platforms at various levels resting on common stirrups.

**Multi-point adjustable suspension scaffold** means a suspension scaffold consisting of a platform(s) which is suspended by more than two ropes from overhead supports and equipped with means to raise and lower the platform to desired work levels. Such scaffold

includes chimney hoists.

**Needle beam scaffold** means a platform suspended from needle beams.

**Open sides and ends** means the edges of a platform that are more than 14 inches (36 cm) away horizontally from a sturdy, continuous, vertical surface (such as a building wall) or a sturdy, continuous horizontal surface (such as a floor), or a point of access. Exception: For plastering and lathing operations the horizontal threshold distance is 18 inches (46 cm).

**Outrigger** means the structural member of a supported scaffold used to increase the base width of a scaffold in order to provide support for and increased stability of the scaffold.

**Outrigger beam (Thrustout)** means the structural member of a suspension scaffold or outrigger scaffold which provides support for the scaffold by extending the scaffold point of attachment to a point out and away from the structure or building.

**Outrigger scaffold** means a supported scaffold consisting of a platform resting on outrigger beams (thrustouts) projecting beyond the wall or face of the building or structure, the inboard ends of which are secured inside the building or structure.

**Overhand bricklaying** means the process of laying bricks and masonry units such that the surface of the wall to be jointed is on the opposite side of the wall from the mason, requiring the mason to lean over the wall to complete the work. It includes mason tending and electrical installation incorporated into the brick wall during the overhand bricklaying process.

**Personal fall arrest system** means a system used to arrest an employee's fall. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or combinations of these.

**Platform** means a work surface elevated above lower levels. Platforms can be constructed using individual steel plates/gratings,

fabricated steel plates/gratings, fabricated decks, and fabricated platforms.

**Pole scaffold** (see definitions for “Single-pole scaffold” and “Double (independent) pole scaffold”).

**Power operated hoist** means a hoist which is powered by other than human energy.

**Pump jack scaffold** means a supported scaffold consisting of a platform supported by vertical poles and movable support brackets.

**Qualified** means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.

**Rated load** means the manufacturer’s specified maximum load to be lifted by a hoist or to be applied to a scaffold or scaffold component.

**Repair bracket scaffold** means a supported scaffold consisting of a platform supported by brackets which are secured in place around the circumference or perimeter of a chimney, stack, tank or other supporting structure by one or more wire ropes placed around the supporting structure.

**Roof bracket scaffold** means a rooftop supported scaffold consisting of a platform resting on angular-shaped supports.

**Runner** (ledger or ribbon) means the lengthwise horizontal spacing or bracing member which may support the bearers.

**Scaffold** means any temporary elevated platform (supported or suspended) and its supporting structure (including points of anchorage), used for supporting employees or materials or both.

**Self-contained adjustable scaffold** means a combination supported and suspension scaffold consisting of an adjustable platform(s) mounted on an independent supporting frame(s) not a part of the object being worked on, and which is equipped with a means to permit the raising and

lowering of the platform(s). Such systems include rolling roof rigs, rolling outrigger systems, and some masons’ adjustable supported scaffolds.

**Shore scaffold** means a supported scaffold which is placed against a building or structure and held in place with props.

**Single-point adjustable suspension scaffold** means a suspension scaffold consisting of a platform suspended by one rope from an overhead support and equipped with means to permit the movement of the platform to desired work levels. **Single-pole scaffold** means a supported scaffold consisting of a platform(s) resting on bearers, the outside ends of which are supported on runners secured to a single row of posts or uprights, and the inner ends of which are supported on or in a structure or building wall.

**Stair tower (Scaffold stairway/tower)** means a tower comprised of scaffold components and which contains internal stairway units and rest platforms. These towers are used to provide access to scaffold platforms and other elevated points such as floors and roofs.

**Stall load** means the load at which the prime-mover of a power-operated hoist stalls or the power to the prime-mover is automatically disconnected.

**Step, platform, and trestle ladder scaffold** means a platform resting directly on the rungs of step ladders or trestle ladders.

**Stilts** means a pair of poles or similar supports with raised footrests, used to permit walking above the ground or working surface.

**Stonesetters’ multi-point adjustable suspension scaffold** means a continuous run suspension scaffold designed and used for stonesetters’ operations.

**Supported scaffold** means one or more platforms supported by outrigger beams, brackets, poles, legs, uprights, posts, frames, or similar rigid support.

**Suspension scaffold** means one or more

platforms suspended by ropes or other non-rigid means from an overhead structure(s).

**System scaffold** means a scaffold consisting of posts with fixed connection points that accept runners, bearers, and diagonals that can be interconnected at predetermined levels.

**Tank builders' scaffold** means a supported scaffold consisting of a platform resting on brackets that are either directly attached to a cylindrical tank or attached to devices that are attached to such a tank.

**Top plate bracket scaffold** means a scaffold supported by brackets that hook over or are attached to the top of a wall. This type of scaffold is similar to carpenters' bracket scaffolds and form scaffolds and is used in residential construction for setting trusses.

**Tube and coupler scaffold** means a supported or suspended scaffold consisting of a platform(s) supported by tubing, erected with coupling devices connecting uprights, braces, bearers, and runners.

**Tubular welded frame scaffold** (see "Fabricated frame scaffold").

**Two-point suspension scaffold (swing stage)** means a suspension scaffold consisting of a platform supported by hangers (stirrups) suspended by two ropes from overhead supports and equipped with means to permit the raising and lowering of the platform to desired work levels.

**Unstable objects means** items whose strength, configuration, or lack of stability may allow them to become dislocated and shift and therefore may not properly support the loads imposed on them. Unstable objects do not constitute a safe base support for scaffolds, platforms, or employees. Examples include, but are not limited to, barrels, boxes, loose brick, and concrete blocks.

**Vertical pickup** means a rope used to support the horizontal rope in catenary scaffolds.

**Walkway** means a portion of a scaffold platform used only for access and not as a work level.

**Window jack scaffold** means a platform resting on a bracket or jack which projects through a window opening.

### General requirements.

This section does not apply to aerial lifts

#### **(a) Capacity**

**(1)** Each scaffold and scaffold component shall be capable of supporting, without failure, its own weight and at least 4 times the maximum intended load applied or transmitted to it.

**(2)** Direct connections to roofs and floors, and counterweights used to balance adjustable suspension scaffolds, shall be capable of resisting at least 4 times the tipping moment imposed by the scaffold operating at the rated load of the hoist, or 1.5 (minimum) times the tipping moment imposed by the scaffold operating at the stall load of the hoist, whichever is greater.

**(3)** Each suspension rope, including connecting hardware, used on non-adjustable suspension scaffolds shall be capable of supporting, without failure, at least 6 times the maximum intended load applied or transmitted to that rope.

**(4)** Each suspension rope, including connecting hardware, used on adjustable suspension scaffolds shall be capable of supporting, without failure, at least 6 times the maximum intended load applied or transmitted to that rope with the scaffold operating at either the rated load of the hoist, or 2 (minimum) times the stall load of the hoist, whichever is greater.

**(5)** The stall load of any scaffold hoist shall not exceed 3 times its rated load.

**(6)** Scaffolds shall be designed by a qualified person and shall be constructed and

loaded in accordance with that design. Non-mandatory Appendix A to this subpart contains examples of criteria that will enable an employer to comply with paragraph (a) of this section.

### **(b) Scaffold platform construction.**

**(1)** Each platform on all working levels of scaffolds shall be fully steel plates/gratings or decked between the front uprights and the guardrail supports as follows:

**(i)** Each platform unit (e.g., scaffold steel plates/gratings, fabricated steel plates/gratings, fabricated deck, or fabricated platform) shall be installed so that the space between adjacent units and the space between the platform and the uprights is no more than 1 inch (2.5 cm) wide, except where the employer can demonstrate that a wider space is necessary (for example, to fit around uprights when side brackets are used to extend the width of the platform).

**(ii)** Where the employer makes the demonstration provided for in paragraph (b)(1)(i) of this section, the platform shall be steel plates/gratings or decked as fully as possible and the remaining open space between the platform and the uprights shall not exceed 9 1/2 inches (24.1 cm).

Exception to paragraph (b)(1): The requirement in paragraph (b)(1) to provide full steel plates/gratings or decking does not apply to platforms used solely as walkways or solely by employees performing scaffold erection or dismantling. In these situations, only the steel plates/gratings that the employer establishes is necessary to provide safe working conditions is required.

**(2)** Except as provided in paragraphs (b)(2)(i) and (b)(2)(ii) of this section, each scaffold platform and walkway shall be at least 18 inches (46 cm) wide.

**(i)** Each ladder jack scaffold, top plate bracket scaffold, roof bracket scaffold, and pump jack scaffold shall be at least 12 inches (30 cm) wide. There is no minimum width requirement for boatswains' chairs.

**(ii)** Where scaffolds must be used in areas

that the employer can demonstrate are so narrow that platforms and walkways cannot be at least 18 inches (46 cm) wide, such platforms and walkways shall be as wide as feasible, and employees on those platforms and walkways shall be protected from fall hazards by the use of guardrails and/or personal fall arrest systems.

**(3)** Except as provided in paragraphs (b)(3)(i) and (ii) of this section, the front edge of all platforms shall not be more than 14 inches (36 cm) from the face of the work, unless guardrail systems are erected along the front edge and/or personal fall arrest systems are used in accordance with paragraph (g) of this section to protect employees from fall-

**(i)** The maximum distance from the face for outrigger scaffolds shall be 3 inches (8 cm);

**(ii)** The maximum distance from the face for plastering and lathing operations shall be 18 inches (46 cm).

**(4)** Each end of a platform, unless cleated or otherwise restrained by hooks or equivalent means, shall extend over the centerline of its support at least 6 inches (15 cm).

**(5)(i)** Each end of a platform 10 feet or less in length shall not extend over its support more than 12 inches (30 cm) unless the platform is designed and installed so that the cantilevered portion of the platform is able to support employees and/or materials without tipping, or has guardrails which block employee access to the cantilevered end.

**(ii)** Each platform greater than 10 feet in length shall not extend over its support more than 18 inches (46 cm), unless it is designed and installed so that the cantilevered portion of the platform is able to support employees without tipping, or has guardrails which block employee access to the cantilevered end.

**(6)** On scaffolds where scaffold steel plates/gratings are abutted to create a long platform, each

abutted end shall rest on a separate support surface. This provision does not preclude the use of common support members, such as "T" sections, to support abutting steel plates/gratings, or hook on platforms designed to rest on common supports.

**(7)** On scaffolds where platforms are overlapped to create a long platform, the overlap shall occur only over supports, and shall not be less than 12 inches (30 cm) unless the platforms are nailed together or otherwise restrained to prevent movement.

**(8)** At all points of a scaffold where the platform changes direction, such as turning a corner, any platform that rests on a bearer at an angle other than a right angle shall be laid first, and platforms which rest at right angles over the same bearer shall be laid second, on top of the first platform.

**(9)** Platforms may be coated periodically with fire-retardant finishes and slip-resistant finishes.

**(10)** Scaffold components manufactured by different manufacturers shall not be inter-mixed unless the components fit together without force and the scaffold's structural integrity is maintained by the user. Scaffold components manufactured by different manufacturers shall not be modified in order to intermix them unless a competent person determines the resulting scaffold is structurally sound.

**(11)** Scaffold components made of dissimilar metals shall not be used together unless a competent person has determined that galvanic action will not reduce the strength of any component to a level below that required by paragraph (a)(1) of this section.

**(c) Criteria for supported scaffolds.**

**(1)** Supported scaffolds with a height to

base width (including outrigger supports, if used) ratio of more than four to one (4:1) shall be restrained from tipping by guying, tying, bracing, or equivalent means, as follows:

**(i)** Guys, ties, and braces shall be installed at locations where horizontal members support both inner and outer legs.

**(ii)** Guys, ties, and braces shall be installed according to the scaffold manufacturer's recommendations or at the closest horizontal member to the 4:1 height and be repeated vertically at locations of horizontal members every 20 feet (6.1 m) or less thereafter for scaffolds 3 feet (0.91 m) wide or less, and every 26 feet (7.9 m) or less thereafter for scaffolds greater than 3 feet (0.91 m) wide. The top guy, tie or brace of completed scaffolds shall be placed no further than the 4:1 height from the top. Such guys, ties and braces shall be installed at each end of the scaffold and at horizontal intervals not to exceed 30 feet (9.1 m) (measured from one end [not both] towards the other).

**(iii)** Ties, guys, braces, or outriggers shall be used to prevent the tipping of supported scaffolds in all circumstances where an eccentric load, such as a cantilevered work platform, is applied or is transmitted to the scaffold.

**(2)** Supported scaffold poles, legs, posts, frames, and uprights shall bear on base plates and mud sills or other adequate firm foundation.

**(i)** Footings shall be level, sound, rigid, and capable of supporting the loaded scaffold without settling or displacement.

**(ii)** Unstable objects shall not be used to support scaffolds or platform units.

**(iii)** Unstable objects shall not be used as working platforms.

**(iv)** Front-end loaders and similar pieces of equipment shall not be used to support scaffold platforms unless they have been specifically designed by the manufacturer for such use.

(v) Fork-lifts shall not be used to support scaffold platforms unless the entire platform is attached to the fork and the fork-lift is not moved horizontally while the platform is occupied.

(3) Supported scaffold poles, legs, posts, frames, and uprights shall be plumb and braced to prevent swaying and displacement.

#### **(d) Criteria for suspension scaffolds.**

(1) All suspension scaffold support devices, such as outrigger beams, cornice hooks, parapet clamps, and similar devices, shall rest on surfaces capable of supporting at least 4 times the load imposed on them by the scaffold operating at the rated load of the hoist (or at least 1.5 times the load imposed on them by the scaffold at the stall capacity of the hoist, whichever is greater).

(2) Suspension scaffold outrigger beams, when used, shall be made of structural metal or equivalent strength material, and shall be restrained to prevent movement.

(3) The inboard ends of suspension scaffold outrigger beams shall be stabilized by bolts or other direct connections to the floor or roof deck, or they shall have their inboard ends stabilized by counterweights, except masons' multi-point adjustable suspension scaffold outrigger beams shall not be stabilized by counterweights.

(i) Before the scaffold is used, direct connections shall be evaluated by a competent person who shall confirm, based on the evaluation, that the supporting surfaces are capable of supporting the loads to be imposed. In addition, masons' multi-point adjustable suspension scaffold connections shall be designed by an engineer experienced in such scaffold design.

(ii) Counterweights shall be made of non-flowable material. Sand, gravel and similar materials that can be easily dislocated shall not be used as counterweights.

(iii) Only those items specifically designed

as counterweights shall be used to counterweight scaffold systems. Construction materials such as, but not limited to, masonry units and rolls of roofing felt, shall not be used as counterweights.

(iv) Counterweights shall be secured by mechanical means to the outrigger beams to prevent accidental displacement.

(v) Counterweights shall not be removed from an outrigger beam until the scaffold is disassembled.

(vi) Outrigger beams which are not stabilized by bolts or other direct connections to the floor or roof deck shall be secured by tiebacks.

(vii) Tiebacks shall be equivalent in strength to the suspension ropes.

(viii) Outrigger beams shall be placed perpendicular to its bearing support (usually the face of the building or structure). However, where the employer can demonstrate that it is not possible to place an outrigger beam perpendicular to the face of the building or structure because of obstructions that cannot be moved, the outrigger beam may be placed at some other angle, provided opposing angle tiebacks are used.

(ix) Tiebacks shall be secured to a structurally sound anchorage on the building or structure. Sound anchorages include structural members, but do not include standpipes, vents, other piping systems, or electrical conduit.

(x) Tiebacks shall be installed perpendicular to the face of the building or structure, or opposing angle tiebacks shall be installed. Single tiebacks installed at an angle are prohibited.

(4) Suspension scaffold outrigger beams shall be:

(i) Provided with stop bolts or shackles at both ends;

(ii) Securely fastened together with the flanges turned out when channel iron beams are used in place of I-beams;

(iii) Installed with all bearing supports perpendicular to the beam center line;

- (iv)** Set and maintained with the web in a vertical position; and
- (v)** When an outrigger beam is used, the shackle or clevis with which the rope is attached to the outrigger beam shall be placed directly over the center line of the stirrup.
- (5)** Suspension scaffold support devices such as cornice hooks, roof hooks, roof irons, parapet clamps, or similar devices shall be:
  - (i)** Made of steel, wrought iron, or materials of equivalent strength;
  - (ii)** Supported by bearing blocks; and
  - (iii)** Secured against movement by tiebacks installed at right angles to the face of the building or structure, or opposing angle tiebacks shall be installed and secured to a structurally sound point of anchorage on the building or structure. Sound points of anchorage include structural members, but do not include standpipes, vents, other piping systems, or electrical conduit.
  - (iv)** Tiebacks shall be equivalent in strength to the hoisting rope.
- (6)** When winding drum hoists are used on a suspension scaffold, they shall contain not less than four wraps of the suspension rope at the lowest point of scaffold travel. When other types of hoists are used, the suspension ropes shall be long enough to allow the scaffold to be lowered to the level below without the rope end passing through the hoist, or the rope end shall be configured or provided with means to prevent the end from passing through the hoist.
- (7)** The use of repaired wire rope as suspension rope is prohibited.
- (8)** Wire suspension ropes shall not be joined together except through the use of eye splice thimbles connected with shackles or coverplates and bolts.
- (9)** The load end of wire suspension ropes shall be equipped with proper size thimbles and secured by eyesplicing or equivalent means.
- (10)** Ropes shall be inspected for defects by

a competent person prior to each work shift and after every occurrence which could affect a rope's integrity. Ropes shall be replaced if any of the following conditions exist:

- (i)** Any physical damage which impairs the function and strength of the rope.
- (ii)** Kinks that might impair the tracking or wrapping of rope around the drum(s) or sheave(s).
- (iii)** Six randomly distributed broken wires in one rope lay or three broken wires in one strand in one ropelay.
- (iv)** Abrasion, corrosion, scrubbing, flattening or peening causing loss of more than one-third of the original diameter of the outside wires.
- (v)** Heat damage caused by a torch or any damage caused by contact with electrical wires.
- (vi)** Evidence that the secondary brake has been activated during an overspeed condition and has engaged the suspension rope.
- (11)** Swaged attachments or spliced eyes on wire suspension ropes shall not be used unless they are made by the wire rope manufacturer or a qualified person.
- (12)** When wire rope clips are used on suspension scaffolds:
  - (i)** There shall be a minimum of 3 wire rope clips installed, with the clips a minimum of 6 rope diameters apart;
  - (ii)** Clips shall be installed according to the manufacturer's recommendations;
  - (iii)** Clips shall be retightened to the manufacturer's recommendations after the initial loading;
  - (iv)** Clips shall be inspected and retightened to the manufacturer's recommendations at the start of each work shift thereafter;
  - (v)** U-bolt clips shall not be used at the point of suspension for any scaffold hoist;
  - (vi)** When U-bolt clips are used, the U-bolt shall be placed over the dead end of the rope, and the saddle shall be placed over the live end of the rope.
- (13)** Suspension scaffold power-operated

hoists and manual hoists shall be tested by a qualified testing laboratory.

**(14)** Gasoline-powered equipment and hoists shall not be used on suspension scaffolds.

**(15)** Gears and brakes of power-operated hoists used on suspension scaffolds shall be enclosed.

**(16)** In addition to the normal operating brake, suspension scaffold power-operated hoists and manually operated hoists shall have a braking device or locking pawl which engages automatically when a hoist makes either of the following uncontrolled movements: an instantaneous change in momentum or an accelerated overspeed.

**(17)** Manually operated hoists shall require a positive crank force to descend.

**(18)** Two-point and multi-point suspension scaffolds shall be tied or otherwise secured to prevent them from swaying, as determined to be necessary based on an evaluation by a competent person. Window cleaners' anchors shall not be used for this purpose.

**(19)** Devices whose sole function is to provide emergency escape and rescue shall not be used as working platforms. This provision does not preclude the use of systems which are designed to function both as suspension scaffolds and emergency systems.

#### **(e) Access.**

This paragraph applies to scaffold access for all employees. Access requirements for employees erecting or dismantling supported scaffolds are specifically addressed in paragraph (e)(9) of this section.

**(1)** When scaffold platforms are more than 2 feet (0.6 m) above or below a point of access, portable ladders, hook-on ladders, attachable ladders, stair towers (scaffold stairways/towers), stairway-type ladders (such as ladder stands), ramps, walkways, integral prefabricated scaffold access, or

direct access from another scaffold, structure, personnel hoist, or similar surface shall be used. Crossbraces shall not be used as a means of access.

**(2)** Portable, hook-on, and attachable ladders (Additional requirements for the proper construction and use of portable ladders are contained in subpart X of this part—Stairways and Ladders):

**(i)** Portable, hook-on, and attachable ladders shall be positioned so as not to tip the scaffold;

**(ii)** Hook-on and attachable ladders shall be positioned so that their bottom rung is not more than 24 inches (61 cm) above the scaffold supporting level;

**(iii)** When hook-on and attachable ladders are used on a supported scaffold more than 35 feet (10.7 m) high, they shall have rest platforms at 35-foot (10.7 m) maximum vertical intervals.

**(iv)** Hook-on and attachable ladders shall be specifically designed for use with the type of scaffold used;

**(v)** Hook-on and attachable ladders shall have a minimum rung length of 11 1/2 inches (29 cm); and

**(vi)** Hook-on and attachable ladders shall have uniformly spaced rungs with a maximum spacing between rungs of 16 3/4 inches.

**(3)** Stairway-type ladders shall:

**(i)** Be positioned such that their bottom step is not more than 24 inches (61 cm) above the scaffold supporting level;

**(ii)** Be provided with rest platforms at 12 foot (3.7 m) maximum vertical intervals;

**(iii)** Have a minimum step width of 16 inches (41 cm), except that mobile scaffold stairway-type ladders shall have a minimum step width of 11 1/2 inches (30 cm); and

**(iv)** Have slip-resistant treads on all steps and landings.

**(4)** Stairtowers (scaffold stairway/ towers) shall be positioned such that their bottom step is not more than 24 inches (61 cm.) above the scaffold supporting level.

- (i)** A stairrail consisting of a toprail and a midrail shall be provided on each side of each scaffold stairway.
  - (ii)** The toprail of each stairrail system shall also be capable of serving as a handrail, unless a separate handrail is provided.
  - (iii)** Handrails, and toprails that serve as handrails, shall provide an adequate handhold for employees grasping them to avoid falling.
  - (iv)** Stairrail systems and handrails shall be surfaced to prevent injury to employees from punctures or lacerations, and to prevent snagging of clothing.
  - (v)** The ends of stairrail systems and handrails shall be constructed so that they do not constitute a projection hazard.
  - (vi)** Handrails, and toprails that are used as handrails, shall be at least 3 inches (7.6 cm) from other objects.
  - (vii)** Stairrails shall be not less than 28 inches (71 cm) nor more than 37 inches (94 cm) from the upper surface of the stairrail to the surface of the tread, in line with the face of the riser at the forward edge of the tread.
  - (viii)** A landing platform at least 18 inches (45.7 cm) wide by at least 18 inches (45.7 cm) long shall be provided at each level.
  - (ix)** Each scaffold stairway shall be at least 18 inches (45.7 cm) wide between stairrails.
  - (x)** Treads and landings shall have slip-resistant surfaces.
  - (xi)** Stairways shall be installed between 40 degrees and 60 degrees from the horizontal.
  - (xii)** Guardrails meeting the requirements of paragraph (g)(4) of this section shall be provided on the open sides and ends of each landing.
  - (xiii)** Riser height shall be uniform, within 1/4 inch, (0.6 cm) for each flight of stairs. Greater variations in riser height are allowed for the top and bottom steps of the entire system, not for each flight of stairs.
  - (xiv)** Tread depth shall be uniform, within 1/4 inch, for each flight of stairs.
- (5) Ramps and walkways.**
- (i)** Ramps and walkways 6 feet (1.8 m) or more above lower levels shall have guardrail systems

which comply with subpart M of this part—Fall Protection;

- (ii)** No ramp or walkway shall be inclined more than a slope of one (1) vertical to three (3) horizontal (20 degrees above the horizontal).
  - (iii)** If the slope of a ramp or a walkway is steeper than one (1) vertical in eight (8) horizontal, the ramp or walkway shall have cleats not more than fourteen (14) inches (35 cm) apart which are securely fastened to the steel plates/gratings to provide footing.
- (6) Integral prefabricated scaffold access frames shall:**
- (i)** Be specifically designed and constructed for use as ladder rungs;
  - (ii)** Have a rung length of at least 8 inches (20 cm);
  - (iii)** Not be used as work platforms when rungs are less than 11 1/2 inches in length, unless each affected employee uses fall protection, or a positioning device
  - (iv)** Be uniformly spaced within each frame section;
  - (v)** Be provided with rest platforms at 35-foot (10.7 m) maximum vertical intervals on all supported scaffolds more than 35 feet (10.7 m) high; and
  - (vi)** Have a maximum spacing between rungs of 16 3/4 inches (43 cm). Non-uniform rung spacing caused by joining end frames together is allowed, provided the resulting spacing does not exceed 16 3/4 inches (43 cm).
- (7) Steps and rungs of ladder and stairway type access shall line up vertically with each other between rest platforms.**
- (8) Direct access to or from another surface shall be used only when the scaffold is not more than 14 inches (36 cm) horizontally and not more than 24 inches (61 cm) vertically from the other surface.**
- (9) Effective September 2, 1997, access for employees erecting or dismantling supported scaffolds shall be in accordance with the following:**
- (i)** The employer shall provide safe means of

access for each employee erecting or dismantling a scaffold where the provision of safe access is feasible and does not create a greater hazard.

The employer shall have a competent person determine whether it is feasible or would pose a greater hazard to provide, and have employees use a safe means of access. This determination shall be based on site conditions and the type of scaffold being erected or dismantled.

**(ii)** Hook-on or attachable ladders shall be installed as soon as scaffold erection has progressed to a point that permits safe installation and use.

**(iii)** When erecting or dismantling tubular welded frame scaffolds, (end) frames, with horizontal members that are parallel, level and are not more than 22 inches apart vertically may be used as climbing devices for access, provided they are erected in a manner that creates a usable ladder and provides good hand hold and foot space.

**(iv)** Cross braces on tubular welded frame scaffolds shall not be used as a means of access or egress.

**(f) Use**

**(1)** Scaffolds and scaffold components shall not be loaded in excess of their maximum intended

loads or rated capacities, whichever is less.

**(2)** The use of shore or lean-to scaffolds is prohibited.

**(3)** Scaffolds and scaffold components shall be inspected for visible defects by a competent person before each work shift, and after any occurrence which could affect a scaffold's structural integrity.

**(4)** Any part of a scaffold damaged or weakened such that its strength is less than that required by paragraph (a) of this section shall be immediately repaired or replaced, braced to meet those provisions, or removed from service until repaired.

**(5)** Scaffolds shall not be moved horizontally while employees are on them.

**(6)** The clearance between scaffolds and power lines shall be as follows: Scaffolds shall not be erected, used, dismantled, altered, or moved such that they or any conductive material handled on them might come closer to exposed and energized power lines than as follows:

Insulated lines voltage	Minimum distance	Alternatives
Less than 300 volts ..... 300 volts to 50 kv..... More than 50 kv .....	3 feet (0.9 M). 10 feet (3.1 m) 10 feet (3.1 M) plus .4 inches (1.0 cm) for each 1 kv over 50 kv.	2 times the length of the line insulator, but never less than 10 feet (3.1 m).
Uninsulated lines voltage	Minimum distance	Alternatives
Less than 50 kv ..... More than 50 kv .....	10 feet (3.1 M). 10 feet (3.1 M) plus .4 inches (1.0 cm) for each 1 kv over 50 kv.	2 times the length of the line insulator, but never less than 10 feet (3.1 m).

Exception to paragraph (f)(6): Scaffolds and materials may be closer to power lines than specified above where such clearance is necessary for performance of work, and only after the utility company, or electrical system operator, has been notified of the need to work closer and the utility company, or electrical system operator, has deenergized the lines, relocated the lines, or installed protective coverings to prevent accidental contact with the lines.

**(7)** Scaffolds shall be erected, moved, dismantled, or altered only under the supervision and direction of a competent person qualified in scaffold erection, moving, dismantling or alteration. Such activities shall be performed only by experienced and trained employees selected for such work by the competent person.

**(8)** Employees shall be prohibited from working on scaffolds covered with snow, ice, or other slippery material except as necessary for removal of such materials.

**(9)** Where swinging loads are being hoisted onto or near scaffolds such that the loads might contact the scaffold, tag lines or equivalent measures to control the loads shall be used.

**(10)** Suspension ropes supporting adjustable suspension scaffolds shall be of a diameter large enough to provide sufficient surface area for the functioning of brake and hoist mechanisms.

**(11)** Suspension ropes shall be shielded from heat-producing processes. When acids or other corrosive substances are used on a scaffold, the ropes shall be shielded, treated to protect against the corrosive substances, or shall be of a material that will not be damaged by the substance being used.

**(12)** Work on or from scaffolds is prohibited during storms or high winds unless a competent person has determined that it is safe for employees to be on the scaffold and those employees are protected by a personal fall arrest system or wind screens. Wind screens shall not be used unless the

scaffold is secured against the anticipated wind forces imposed.

**(13)** Debris shall not be allowed to accumulate on platforms.

**(14)** Makeshift devices, such as but not limited to boxes and barrels, shall not be used on top of scaffold platforms to increase the working level height of employees.

**(15)** Ladders shall not be used on scaffolds to increase the working level height of employees, except on large area scaffolds where employers have satisfied the following criteria:

**(i)** When the ladder is placed against a structure which is not a part of the scaffold, the scaffold shall be secured against the sideways thrust exerted by the ladder;

**(ii)** The platform units shall be secured to the scaffold to prevent their movement;

**(iii)** The ladder legs shall be on the same platform or other means shall be provided to stabilize the ladder against unequal platform deflection, and

**(iv)** The ladder legs shall be secured to prevent them from slipping or being pushed off the platform.

**(16)** Platforms shall not deflect more than 1/60 of the span when loaded.

**(17)** To reduce the possibility of welding current arcing through the suspension wire rope when performing welding from suspended scaffolds, the following precautions shall be taken, as applicable:

**(i)** An insulated thimble shall be used to attach each suspension wire rope to its hanging support (such as cornice hook or outrigger). Excess suspension wire rope and any additional independent lines from grounding shall be insulated;

**(ii)** The suspension wire rope shall be covered with insulating material extending at least 4 feet (1.2 m) above the hoist. If there is a tail line below the hoist, it shall be insulated to prevent contact with the platform. The portion of the tail line that hangs free below the scaffold shall be guided or retained, or both, so that it does not become

grounded;

**(iii)** Each hoist shall be covered with insulated protective covers;

**(iv)** In addition to a work lead attachment required by the welding process, a grounding conductor shall be connected from the scaffold to the structure. The size of this conductor shall be at least the size of the welding process work lead, and this conductor shall not be in series with the welding process or the workpiece;

**(v)** If the scaffold grounding lead is disconnected at any time, the welding machine shall be shut off; and

**(vi)** An active welding rod or uninsulated welding lead shall not be allowed to contact the scaffold or its suspension system.

#### **(g) Fall protection.**

**(1)** Each employee on a scaffold more than 10 feet (3.1 m) above a lower level shall be protected from falling to that lower level. Paragraphs (g)(1) (i) through (vii) of this section establish the types of fall protection to be provided to the employees on each type of scaffold. Paragraph (g)(2) of this section addresses fall protection for scaffold erectors and dismantlers.

Note to paragraph (g)(1): The fall protection requirements for employees installing suspension scaffold support systems on floors, roofs, and other elevated surfaces are set forth in subpart M of this part.

**(i)** Each employee on a boatswains' chair, catenary scaffold, float scaffold, needle beam scaffold, or ladder jack scaffold shall be protected by a personal fall arrest system;

**(ii)** Each employee on a single-point or two-point adjustable suspension scaffold shall be protected by both a personal fall arrest system and guardrail system;

**(iii)** Each employee on a crawling board (chicken ladder) shall be protected by a personal fall arrest system, a guardrail system (with minimum 200 pound toprail

capacity), or by a three-fourth inch (1.9 cm) diameter grabline or equivalent handhold securely fastened beside each crawling board;

**(iv)** Each employee on a self-contained adjustable scaffold shall be protected by a guardrail system (with minimum 200 pound toprail capacity) when the platform is supported by the frame structure, and by both a personal fall arrest system and a guardrail system (with minimum 200 pound toprail capacity) when the platform is supported by ropes;

**(v)** Each employee on a walkway located within a scaffold shall be protected by a guardrail system (with minimum 200 pound toprail capacity) installed within 9 1/2 inches (24.1 cm) of and along at least one side of the walkway.

**(vi)** Each employee performing overhand bricklaying operations from a supported scaffold shall be protected from falling from all open sides and ends of the scaffold (except at the side next to the wall being laid) by the use of a personal fall arrest system or guardrail system (with minimum 200 pound toprail capacity).

**(vii)** For all scaffolds not otherwise specified in paragraphs (g)(1)(i) through (g)(1)(vi) of this section, each employee shall be protected by the use of personal fall arrest systems or guardrail systems meeting the requirements of paragraph (g)(4) of this section.

**(2)** Effective September 2, 1997, the employer shall have a competent person determine the feasibility and safety of providing fall protection for employees erecting or dismantling supported scaffolds. Employers are required to provide fall protection for employees erecting or dismantling supported scaffolds where the installation and use of such protection is feasible and does not create a greater hazard.

**(3)** Personal fall arrest systems used on scaffolds shall be attached by

lanyard to a vertical lifeline, horizontal lifeline, or scaffold structural member. Vertical lifelines shall not be used when overhead components, such as overhead protection or additional platform levels, are part of a single-point or two-point adjustable suspension scaffold.

**(i)** When vertical lifelines are used, they shall be fastened to a fixed safe point of anchorage, shall be independent of the scaffold, and shall be protected from sharp edges and abrasion. Safe points of anchorage include structural members of buildings, but do not include standpipes, vents, other piping systems, electrical conduit, outrigger beams, or counterweights.

**(ii)** When horizontal lifelines are used, they shall be secured to two or more structural members of the scaffold, or they may be looped around both suspension and independent suspension lines (on scaffolds so equipped) above the hoist and brake attached to the end of the scaffold. Horizontal lifelines shall not be attached only to the suspension ropes.

**(iii)** When lanyards are connected to horizontal lifelines or structural members on a single-point or two-point adjustable suspension scaffold, the scaffold shall be equipped with additional independent support lines and automatic locking devices capable of stopping the fall of the scaffold in the event one or both of the suspension ropes fail. The independent support lines shall be equal in number and strength to the suspension ropes.

**(iv)** Vertical lifelines, independent support lines, and suspension ropes shall not be attached to each other, nor shall they be attached to or use the same point of anchorage, nor shall they be attached to the same point on the scaffold or personal fall arrest system.

**(3)** Guardrail systems installed to meet the requirements of this section shall comply with the following provisions (guardrail systems built in accordance with Appendix

A to this subpart will be deemed to meet the requirements of paragraphs (g)(4) (vii), (viii), and (ix) of this section):

**(i)** Guardrail systems shall be installed along all open sides and ends of platforms. Guardrail systems shall be installed before the scaffold is released for use by employees other than erection/dismantling crews.

**(ii)** The top edge height of top rails or equivalent member on supported scaffolds manufactured or placed in service after January 1, 2000 shall be installed between 38 inches (0.97 m) and 45 inches (1.2 m) above the platform surface. The top edge height on supported scaffolds manufactured and placed in service before January 1, 2000, and on all suspended scaffolds where both a guardrail and a personal fall arrest system are required shall be between 36 inches (0.9 m) and 45 inches (1.2 m). When conditions warrant, the height of the top edge may exceed the 45-inch height, provided the guardrail system meets all other criteria of paragraph (g)(4).

**(iii)** When midrails, screens, mesh, intermediate vertical members, solid panels, or equivalent structural members are used, they shall be installed between the top edge of the guardrail system and the scaffold platform.

**(iv)** When midrails are used, they shall be installed at a height approximately midway between the top edge of the guardrail system and the platform surface.

**(v)** When screens and mesh are used, they shall extend from the top edge of the guardrail system to the scaffold platform, and along the entire opening between the supports.

**(vi)** When intermediate members (such as balusters or additional rails) are used, they shall not be more than 19 inches (48 cm) apart.

**(vii)** Each top rail or equivalent member of a guardrail system shall be capable of withstanding, without failure, a force applied in any downward or horizontal direction at any

point along its top edge of at least 100 pounds (445 n) for guardrail systems installed on single-point adjustable suspension scaffolds or two-point adjustable suspension scaffolds, and at least 200 pounds (890 n) for guardrail systems installed on all other scaffolds.

**(viii)** When the loads specified in paragraph (g)(4)(vii) of this section are applied in a downward direction, the top edge shall not drop below the height above the platform surface that is prescribed in paragraph (g)(4)(ii) of this section.

**(ix)** Midrails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members of a guardrail system shall be capable of withstanding, without failure, a force applied in any downward or horizontal direction at any point along the midrail or other member of at least 75 pounds (333 n) for guardrail systems with a minimum 100 pound toprail capacity, and at least 150 pounds (666 n) for guardrail systems with a minimum 200 pound toprail capacity.

**(x)** Suspension scaffold hoists and non-walk-through stirrups may be used as end guardrails, if the space between the hoist or stirrup and the side guardrail or structure does not allow passage of an employee to the end of the scaffold.

**(xi)** Guardrails shall be surfaced to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.

**(xii)** The ends of all rails shall not overhang the terminal posts except when such overhang does not constitute a projection hazard to employees.

**(xiii)** Steel or plastic banding shall not be used as a toprail or midrail.

**(xiv)** Manila or plastic (or other synthetic) rope being used for toprails or midrails shall be inspected by a competent person as frequently as necessary to ensure that it continues to meet the strength requirements of paragraph (g) of this section.

**(xv)** Crossbracing is acceptable in place of a midrail when the crossing point of two braces is between 20 inches (0.5 m) and 30 inches (0.8 m) above the work platform or as a toprail when the crossing point of two braces is between 38 inches (0.97 m) and 48 inches (1.3 m) above the work platform. The end points at each upright shall be no more than 48 inches (1.3 m) apart.

#### **(h) Falling object protection.**

**(1)** In addition to wearing hardhats each employee on a scaffold shall be provided with additional protection from falling hand tools, debris, and other small objects through the installation of toeboards, screens, or guardrail systems, or through the erection of debris nets, catch platforms, or canopy structures that contain or deflect the falling objects. When the falling objects are too large, heavy or massive to be contained or deflected by any of the above-listed measures, the employer shall place such potential falling objects away from the edge of the surface from which they could fall and shall secure those materials as necessary to prevent their falling.

**(2)** Where there is a danger of tools, materials, or equipment falling from a scaffold and striking employees below, the following provisions apply:

**(i)** The area below the scaffold to which objects can fall shall be barricaded, and employees shall not be permitted to enter the hazard area; or

**(ii)** A toeboard shall be erected along the edge of platforms more than 10 feet (3.1 m) above lower levels for a distance sufficient to protect employees below, except on float (ship) scaffolds where an edging of 3/4" 1 1/2 inch (2.4 cm) wood/steel or equivalent may be used in lieu of toeboards;

**(iii)** Where tools, materials, or equipment are piled to a height higher than the top edge of the toeboard, paneling or screening extending from the toeboard or platform to the top of

the guardrail shall be erected for a distance sufficient to protect employees below; or

**(iv)** A guardrail system shall be installed with openings small enough to prevent passage of potential falling objects; or

**(v)** A canopy structure, debris net, or catch platform strong enough to withstand the impact forces of the potential falling objects shall be erected over the employees below.

**(3)** Canopies, when used for falling object protection, shall comply with the following criteria:

**(i)** Canopies shall be installed between the falling object hazard and the employees.

**(ii)** When canopies are used on suspension scaffolds for falling object protection, the scaffold shall be equipped with additional independent support lines equal in number to the number of points supported, and equivalent in strength to the strength of the suspension ropes.

**(iii)** Independent support lines and suspension ropes shall not be attached to the same points of anchorage.

**(4)** Where used, toeboards shall be:

**(i)** Capable of withstanding, without failure, a force of at least 50 pounds (222 n) applied

in any downward or horizontal direction at any point along the toeboard (toeboards built in accordance with Appendix A to this subpart will be deemed to meet this requirement); and

**(ii)** At least three and one-half inches (9 cm) high from the top edge of the toeboard to the level of the walking/working surface. Toeboards shall be securely fastened in place at the outermost edge of the platform and have not more than 1/4 inch (0.7 cm) clearance above the walking/working surface. Toeboards shall be solid or with openings not over one inch (2.5 cm) in the greatest dimension.

## **Additional requirements applicable to specific types of scaffolds.**

### **(a) Tube and coupler scaffolds.**

**(1)** When platforms are being moved to the next level, the existing platform shall be left undisturbed until the new bearers have been set in place and braced prior to receiving the new platforms.

**(2)** Transverse bracing forming an "X" across the width of the scaffold shall be installed at the scaffold ends and at least at every third set of posts horizontally (measured from only one end) and every fourth runner vertically. Bracing shall extend diagonally from the inner or outer posts or runners upward to the next outer or inner posts or runners. Building ties shall be installed at the bearer levels between the transverse bracing

**(3)** On straight run scaffolds, longitudinal bracing across the inner and outer rows of posts shall be installed diagonally in both directions, and shall extend from the base of the end posts upward to the top of the scaffold at approximately a 45 degree angle. On scaffolds whose length is greater than their height, such bracing shall be repeated beginning at least at every fifth post. On scaffolds whose length is less than their height, such bracing shall be installed from the base of the end posts upward to the opposite end posts, and then in alternating directions until reaching the top of the scaffold. Bracing shall be installed as close as possible to the intersection of the bearer and post or runner and post.

**(4)** Where conditions preclude the attachment of bracing to posts, bracing shall be attached to the runners as close to the post as possible.

**(5)** Bearers shall be installed transversely between posts, and when coupled to the posts, shall have the inboard coupler bear directly on the runner coupler. When the bearers are coupled to the runners, the couplers shall be as close to the posts as possible.

**(6)** Bearers shall extend beyond the posts and runners, and shall provide full contact with the coupler.

**(7)** Runners shall be installed along the

length of the scaffold, located on both the inside and outside posts at level heights (when tube and coupler guardrails and midrails are used on outside posts, they may be used in lieu of outsiderunners).

**(8)** Runners shall be interlocked on straight runs to form continuous lengths, and shall be coupled to each post. The bottom runners and bearers shall be located as close to the base as possible.

**(9)** Couplers shall be of a structural metal, such as drop-forged steel, malleable iron, or structural grade aluminum. The use of gray cast iron is prohibited.

**(10)** Tube and coupler scaffolds over 125 feet in height shall be designed by a registered professional engineer, and shall be constructed and loaded in accordance with such design. Non-mandatory Appendix A to this subpart contains examples of criteria that will enable an employer to comply with design and loading requirements for tube and coupler scaffolds under 125 feet in height.

**(b) Fabricated frame scaffolds (tubular welded frame scaffolds).**

**(1)** When moving platforms to the next level, the existing platform shall be left undisturbed until the new end frames have been set in place and braced prior to receiving the new platforms.

**(2)** Frames and panels shall be braced by cross, horizontal, or diagonal braces, or combination thereof, which secure vertical members together laterally. The cross braces shall be of such length as will automatically square and align vertical members so that the erected scaffold is always plumb, level, and square. All brace connections shall be secured.

**(3)** Frames and panels shall be joined together vertically by coupling or stacking pins or equivalent means.

**(4)** Where uplift can occur which would

displace scaffold end frames or panels, the frames or panels shall be locked together vertically by pins or equivalent means.

**(5)** Brackets used to support cantilevered loads shall:

**(i)** Be seated with side-brackets parallel to the frames and end-brackets at 90 degrees to the frames;

**(ii)** Not be bent or twisted from these positions; and

**(c)** Be used only to support personnel, unless the scaffold has been designed for other loads by a qualified engineer and built to withstand the tipping forces caused by those other loads being placed on the bracket-supported section of the scaffold. **(6)** Scaffolds over 125 feet (38.0 m) in height above their base plates shall be designed by a registered professional engineer, and shall be constructed and loaded in accordance with such design.

**Plasterers', decorators', and large area scaffolds.** Scaffolds shall be constructed in accordance with paragraphs (a), (b), or (c) of this section, as appropriate.

**(d) Bricklayers' square scaffolds (squares).**

**(1)** Diagonal braces shall be installed on all sides of each square.

**(2)** Diagonal braces shall be installed between squares on the rear and front sides of the scaffold, and shall extend from the bottom of each square to the top of the next square.

**(3)** Scaffolds shall not exceed three tiers in height, and shall be so constructed and arranged that one square rests directly above the other. The upper tiers shall stand on a continuous row of steel plates/gratings laid across the next lower tier, and shall be nailed down or otherwise secured to prevent displacement.

**(e) Horse scaffolds.**

**(1)** Scaffolds shall not be constructed or arranged more than two tiers or 10 feet (3.0 m) in height, whichever is less.

(2) When horses are arranged in tiers, each horse shall be placed directly over the horse in the tier below.

(3) When horses are arranged in tiers, the legs of each horse shall be nailed down or otherwise secured to prevent displacement.

(4) When horses are arranged in tiers, each tier shall be cross braced.

#### **(f) Form scaffolds and carpenters' bracket scaffolds.**

(1) Each bracket shall be attached to the supporting formwork or structure by means of one or more of the following:

A metal stud attachment device; welding; hooking over a secured structural supporting member, with the form wales either bolted to the form or secured by snap ties or tie bolts extending through the form and securely anchored; or, for carpenters' bracket scaffolds only, by a bolt extending through to the opposite side of the structure's wall.

(2) Metal bracket-form scaffolds shall be an integral part of the form panel.

(3) Folding type metal brackets, when extended for use, shall be either bolted or secured with a locking-type pin.

#### **(g) Roof bracket scaffolds.**

(1) Scaffold brackets shall be constructed to fit the pitch of the roof and shall provide a level support for the platform.

(2) Brackets (including those provided with pointed metal projections) shall be anchored in place by nails unless it is impractical to use nails. When nails are not used, brackets shall be secured in place with first-grade manila rope of at least three-fourth inch (1.9 cm) diameter, or equivalent.

#### **(i) Outrigger scaffolds.**

(1) The inboard end of outrigger beams, measured from the fulcrum point to the extreme point of anchorage, shall be not less than one and one-half times the outboard end in length.

(2) Outrigger beams fabricated in the shape of an I-beam or channel shall be placed so that the web section is vertical.

(3) The fulcrum point of outrigger beams shall rest on secure bearings at least 6 inches (15.2 cm) in each horizontal dimension.

(4) Outrigger beams shall be secured in place against movement, and shall be securely braced at the fulcrum point against tipping.

(5) The inboard ends of outrigger beams shall be securely anchored either by means of braced struts bearing against sills in contact with the overhead beams or ceiling, or by means of tension members secured to the floor joists underfoot, or by both.

(6) The entire supporting structure shall be securely braced to prevent any horizontal movement.

(7) To prevent their displacement, platform units shall be nailed, bolted, or otherwise secured to outriggers.

(8) Scaffolds and scaffold components shall be designed by a registered professional engineer and shall be constructed and loaded in accordance with such design.

#### **(j) Pump jack scaffolds.**

(1) Pump jack brackets, braces, and accessories shall be fabricated from metal plates and angles. Each pump jack bracket shall have two positive gripping mechanisms to prevent any failure or slippage.

(2) Poles shall be secured to the structure by rigid triangular bracing or equivalent at the bottom, top, and other points as necessary. When the pump jack has to pass bracing already installed, an additional brace shall be installed approximately 4 feet (1.2 m) above the brace to be passed, and shall be left in place until the pump jack has been moved and the original brace reinstalled.

(3) When guardrails are used for fall protection, a workbench may be used as the toprail only

(4) Work benches shall not be used as scaffold platforms.

### **(k) Ladder jack scaffolds.**

- (1) Platforms shall not exceed a height of 20 feet (6.1 m).
- (2) All ladders used to support ladder jack scaffolds shall meet the requirements of subpart X of this part— Stairways and Ladders, except that job-made ladders shall not be used to support ladder jack scaffolds.
- (3) The ladder jack shall be so designed and constructed that it will bear on the side rails and ladder rungs or on the ladder rungs alone. If bearing on rungs only, the bearing area shall include a length of at least 10 inches (25.4 cm) on each rung.
- (4) Ladders used to support ladder jacks shall be placed, fastened, or equipped with devices to prevent slipping.
- (5) Scaffold platforms shall not be bridged one to another.

### **(l) Window jack scaffolds.**

- (1) Scaffolds shall be securely attached to the window opening.
- (2) Scaffolds shall be used only for the purpose of working at the window opening through which the jack is placed.
- (3) Window jacks shall not be used to support steel plates/gratings placed between one window jack and another, or for other elements of scaffolding.

### **(m) Crawling boards (chicken ladders).**

- (1) Crawling boards shall extend from the roof peak to the eaves when used in connection with roof construction, repair, or maintenance.
- (2) Crawling boards shall be secured to the roof by ridge hooks or by means that meet equivalent criteria (e.g., strength and durability).

### **(n) Step, platform, and trestle ladder scaffolds.**

- (1) Scaffold platforms shall not be placed any higher than the second highest rung or step of the ladder supporting the platform.
- (2) All ladders used in conjunction with step, platform and trestle ladder scaffolds shall meet the pertinent requirements of subpart X of this part— Stairways and Ladders, except that job-made ladders shall not be used to support such scaffolds.
- (3) Ladders used to support step, platform, and trestle ladder scaffolds shall be placed, fastened, or equipped with devices to prevent slipping.
- (4) Scaffolds shall not be bridged one to another.

### **(o) Single-point adjustable suspension scaffolds.**

- (1) When two single-point adjustable suspension scaffolds are combined to form a two-point adjustable suspension scaffold, the resulting two-point scaffold shall comply with the requirements for two-point adjustable suspension scaffolds in paragraph (p) of this section.
- (2) The supporting rope between the scaffold and the suspension device shall be kept vertical unless all of the following conditions are met:
  - (i) The rigging has been designed by a qualified person, and
  - (ii) The scaffold is accessible to rescuers, and
  - (iii) The supporting rope is protected to ensure that it will not chafe at any point where a change in direction occurs, and
  - (iv) The scaffold is positioned so that swinging cannot bring the scaffold into contact with another surface.
- (3) Boatswains' chair tackle shall consist of correct size ball bearings or bushed blocks containing safety hooks and properly "eye-spliced" minimum five-eighth ( 5/8 ) inch

(1.6 cm) diameter first-grade manila rope, or other rope which will satisfy the criteria (e.g., strength and durability) of manila rope.

**(4)** Boatswains' chair seat slings shall be reeved through four corner holes in the seat; shall cross each other on the underside of the seat; and shall be rigged so as to prevent slippage which could cause an out-of-level condition.

**(5)** Boatswains' chair seat slings shall be a minimum of five-eighth ( 5/8 ) inch (1.6 cm) diameter fiber, synthetic, or other rope which will satisfy the criteria (e.g., strength, slip resistance, durability, etc.) of first grade manila rope.

**(6)** When a heat-producing process such as gas or arc welding is being conducted, boatswains' chair seat slings shall be a minimum of three-eighth ( 3/8 ) inch (1.0 cm) wire rope.

#### **(p) Two-point adjustable suspension scaffolds (swing stages).**

The following requirements do not apply to two-point adjustable suspension scaffolds used as masons' or stonemasons' scaffolds. Such scaffolds are covered by paragraph (q) of this section.

**(1)** Platforms shall not be more than 36 inches (0.9 m) wide unless designed by a qualified person to prevent unstable conditions.

**(2)** The platform shall be securely fastened to hangers (stirrups) by U-bolts or by other means

**(3)** The blocks for fiber or synthetic ropes shall consist of at least one double and one single block. The sheaves of all blocks shall fit the size of the rope used.

**(4)** Platforms shall be of the ladder-type, steel plates/gratings-type, beam-type, or light-metal type.

Light metal-type platforms having a rated capacity of 750 pounds or less and platforms 40 feet (12.2 m) or less in length shall be tested and listed by a nationally recognized testing laboratory.

**(5)** Two-point scaffolds shall not be bridged or otherwise connected one to another during raising and lowering operations unless the bridge connections are articulated (attached), and the hoists properly sized.

**(6)** Passage may be made from one platform to another only when the platforms are at the same height, are abutting, and walk-through stirrups specifically designed for this purpose are used.

#### **(q) Multi-point adjustable suspension scaffolds, stonemasons' multi-point adjustable suspension scaffolds, and masons' multi-point adjustable suspension scaffolds.**

**(1)** When two or more scaffolds are used they shall not be bridged one to another unless they are designed to be bridged, the bridge connections are articulated, and the hoists are properly sized.

**(2)** If bridges are not used, passage may be made from one platform to another only when the platforms are at the same height and are abutting.

**(3)** Scaffolds shall be suspended from metal outriggers, brackets, wire rope slings, hooks, or means that meet equivalent criteria (e.g., strength, durability).

#### **(r) Catenary scaffolds.**

**(1)** No more than one platform shall be placed between consecutive vertical pick-ups, and no more than two platforms shall be used on a catenary scaffold.

**(2)** Platforms supported by wire ropes shall have hook-shaped stops on each end of the platforms to prevent them from slipping off the wire ropes. These hooks shall be so

placed that they will prevent the platform from falling if one of the horizontal wire ropes breaks.

**(3)** Wire ropes shall not be tightened to the extent that the application of a scaffold load will overstress them.

**(4)** Wire ropes shall be continuous and without splices between anchors.

#### **(s) Float (ship) scaffolds.**

**(1)** The platform shall be supported by a minimum of two bearers, each of which shall project a minimum of 6 inches (15.2 cm) beyond the platform on both sides. Each bearer shall be securely fastened to the platform.

**(2)** Rope connections shall be such that the platform cannot shift or slip.

**(3)** When only two ropes are used with each float:

**(i)** They shall be arranged so as to provide four ends which are securely fastened to overhead supports.

**(ii)** Each supporting rope shall be hitched around one end of the bearer and pass under the platform to the other end of the bearer where it is hitched again, leaving sufficient rope at each end for the supporting ties.

#### **(t) Interior hung scaffolds.**

**(1)** Scaffolds shall be suspended only from the roof structure or other structural member such as ceiling beams.

**(2)** Overhead supporting members (roof structure, ceiling beams, or other structural members) shall be inspected and checked for strength before the scaffold is erected. **(3)** Suspension ropes and cables shall be connected to the overhead supporting members by shackles, clips, thimbles, or other means that meet equivalent criteria (e.g., strength, durability).

#### **(u) Needle beam scaffolds.**

**(1)** Scaffold support beams shall be installed

on edge.

**(2)** Ropes or hangers shall be used for supports, except that one end of a needle beam scaffold may be supported by a permanent structural member.

**(3)** The ropes shall be securely attached to the needle beams.

**(4)** The support connection shall be arranged so as to prevent the needle beam from rolling or becoming displaced.

**(5)** Platform units shall be securely attached to the needle beams by bolts or equivalent means. Cleats and overhang are not considered to be adequate means of attachment.

#### **(v) Multi-level suspended scaffolds.**

**(1)** Scaffolds shall be equipped with additional independent support lines, equal in number to the number of points supported, and of equivalent strength to the suspension ropes, and rigged to support the scaffold in the event the suspension rope(s) fail.

**(2)** Independent support lines and suspension ropes shall not be attached to the same points of anchorage.

**(3)** Supports for platforms shall be attached directly to the support stirrup and not to any other platform.

#### **(w) Mobile scaffolds.**

**(1)** Scaffolds shall be braced by cross, horizontal, or diagonal braces, or combination thereof, to prevent racking or collapse of the scaffold and to secure vertical members together laterally so as to automatically square and align the vertical members. Scaffolds shall be plumb, level, and squared. All brace connections shall be secured.

**(i)** Scaffolds constructed of tube and coupler components shall also comply with the requirements of paragraph (b) of this section;

**(ii)** Scaffolds constructed of fabricated frame components shall also comply with the

requirements of paragraph (c) of this section.

**(2)** Scaffold casters and wheels shall be locked with positive wheel and/or wheel and swivel locks, or equivalent means, to prevent movement of the scaffold while the scaffold is used in a stationary manner.

**(3)** Manual force used to move the scaffold shall be applied as close to the base as practicable, but not more than 5 feet (1.5 m) above the supporting surface.

**(4)** Power systems used to propel mobile scaffolds shall be designed for such use. Forklifts, trucks, similar motor vehicles or add-on motors shall not be used to propel scaffolds unless the scaffold is designed for such propulsion systems.

**(5)** Scaffolds shall be stabilized to prevent tipping during movement.

**(6)** Employees shall not be allowed to ride on scaffolds unless the following conditions exist:

**(i)** The surface on which the scaffold is being moved is within 3 degrees of level, and free of pits, holes, and obstructions;

**(ii)** The height to base width ratio of the scaffold during movement is two to one or less.

**(iii)** Outrigger frames, when used, are installed on both sides of the scaffold;

**(iv)** When power systems are used, the propelling force is applied directly to the wheels, and does not produce a speed in excess of 1 foot per second (.3 mps); and **(v)**

No employee is on any part of the scaffold which extends outward beyond the wheels, casters, or other supports.

**(7)** Platforms shall not extend outward beyond the base supports of the scaffold unless outrigger frames or equivalent devices are used to ensure stability.

**(8)** Where leveling of the scaffold is neces-

sary, screw jacks or equivalent means shall be used.

**(9)** Caster stems and wheel stems shall be pinned or otherwise secured in scaffold legs or adjustment screws.

**(10)** Before a scaffold is moved, each employee on the scaffold shall be made aware of the move.

#### **(x) Repair bracket scaffolds.**

**(1)** Brackets shall be secured in place by at least one wire rope at least 1/2 inch (1.27 cm) in diameter.

**(2)** Each bracket shall be attached to the securing wire rope (or ropes) by a positive locking device capable of preventing the unintentional detachment of the bracket from the rope, or by equivalent means.

**(3)** Each bracket, at the contact point between the supporting structure and the bottom of the bracket, shall be provided with a shoe (heel block or foot) capable of preventing the lateral movement of the bracket.

**(4)** Platforms shall be secured to the brackets in a manner that will prevent the separation of the platforms from the brackets and the movement of the platforms or the brackets on a completed scaffold.

**(5)** When a wire rope is placed around the structure in order to provide a safe anchorage for personal fall arrest systems used by employees erecting or dismantling scaffolds, the wire rope shall meet the requirements of subpart M of this part, but shall be at least 5/16 inch (0.8 cm) in diameter.

**(6)** Each wire rope used for securing brackets in place or as an anchorage for personal fall arrest systems shall be protected from damage due to contact with edges, corners, protrusions, or other discontinuities of the supporting structure or scaffold components.

**(7)** Tensioning of each wire rope used for securing brackets in place or as an anchorage for personal fall arrest systems shall be by means of a turnbuckle at least 1 inch

(2.54 cm) in diameter, or by equivalent means.

**(8)** Each turnbuckle shall be connected to the other end of its rope by use of an eyesplice thimble of a size appropriate to the turnbuckle to which it is attached.

**(9)** U-bolt wire rope clips shall not be used on any wire rope used to secure brackets or to serve as an anchor for personal fall arrest systems.

**(10)** The employer shall ensure that materials shall not be dropped to the outside of the supporting structure.

**(11)** Scaffold erection shall progress in only one direction around any structure.

**(y) Stilts. Stilts, when used, shall be used in accordance with the following requirements:**

**(1)** An employee may wear stilts on a scaffold only if it is a large area scaffold.

**(2)** When an employee is using stilts on a large area scaffold where a guardrail system is used to provide fall protection, the guardrail system shall be increased in height by an amount equal to the height of the stilts being used by the employee.

**(3)** Surfaces on which stilts are used shall be flat and free of pits, holes and obstructions, such as debris, as well as other trip- ping and falling hazards.

**(4)** Stilts shall be properly maintained. Any alteration of the original equipment shall be approved by the manufacturer.

## 1. General Guidelines and Tables

Maximum intended nominal load (lb/ft <sup>2</sup> )	Maximum permissible span
25.....	10
50.....	8
75.....	6

- (a) Fabricated steel platforms may be used in lieu of steel plates/gratings. Maximum spans for such units shall be as recommended by the manufacturer based on the maximum intended load being calculated as follows

Rated load capacity	Intended load
Light-duty .....	<ul style="list-style-type: none"> <li>• 25 pounds per square foot applied uniformly over the entire span area</li> </ul>
Medium-duty .....	<ul style="list-style-type: none"> <li>• 50 pounds per square foot applied uniformly over the entire span area.</li> </ul>
Heavy-duty .....	<ul style="list-style-type: none"> <li>• 75 pounds per square foot applied uniformly over the entire span area.</li> </ul>
One-person .....	<ul style="list-style-type: none"> <li>• 250 pounds placed at the center of the span (total 250 pounds).</li> </ul>
Two-person .....	<ul style="list-style-type: none"> <li>• 250 pounds placed 18 inches to the left and right of the center of the span (total 500 pounds).</li> </ul>
Three-person .....	<ul style="list-style-type: none"> <li>• 250 pounds placed at the center of the span and 250 pounds placed 18 inches to the left and right of the center of the span (total 750 pounds).</li> </ul>

Note: Platform units used to make scaffold platforms intended for light-duty use shall be capable of supporting at least 25 pounds per square foot applied uniformly over the entire unit-span area, or a 250-pound point load placed on the unit at the center of the span, whichever load produces the greater

shear force.

(b) Guardrails shall be as follows:

(i) Toprails shall be equivalent in strength to 2 inch by 4 inch lumber; or 1 1/4 inch × 1/8 inch structural angle iron; or 1 inch × .070 inch wall steel tubing; or 1.990 inch × .058 inch wall aluminum tubing.

- (ii) Midrails shall be equivalent in strength to 1 1/4 inch × 1 1/4 inch × 1/8 inch structural angle iron; or 1 inch × .070 inch wall steel tubing; or 1.990 inch × .058 inch wall aluminum tubing.
- (iii) Toeboards shall be equivalent in strength to 1 1/4 inch × 1 1/4 inch structural angle iron; or 1 inch × .070 inch wall steel tubing; or 1.990 inch × .058 inch wall aluminum tubing.
- (iv) Posts shall be equivalent in strength to 1 1/4 inch × 1 1/4 inch × 1/8 structural angle

- iron; or 1 inch × .070 inch wall steel tubing; or 1.990 inch × .058 inch wall aluminum tubing.
- (v) Distance between posts shall not exceed 8 feet.
- (c) Overhead protection shall consist of 2-inch nominal steel plates
- (d) Screen installed between toeboards and midrails or top rails shall consist of No. 18 gauge U.S. Standard wire one inch mesh.

**Tube and coupler scaffolds.**

MINIMUM SIZE OF MEMBERS			
	Light duty	Medium duty	Heavy duty
Maximum intended load .....	25 lbs/ft <sup>2</sup> .....	50 lbs/ft <sup>2</sup> .....	75 lbs/ft <sup>2</sup> .
Posts, runners and braces .....	Nominal 2 in. (1.90 inches) OD steel tube or pipe. ....	Nominal 2 in. (1.90 inches) OD steel tube or pipe. ....	Nominal 2 in. (1.90 inches) OD steel tube or pipe.
Bearers .....	Nominal 2 in. (1.90 inches) OD steel tube or pipe and a maximum post spacing of 4 ft. × 10 ft. ....	Nominal 2 in. (1.90 inches) OD steel tube or pipe and a maximum post spacing of 4 ft. × 7 ft. .... Nominal 2 1/2 in. (2.375 in.) OD steel tube or pipe and a maximum post spacing of 6 ft. × 8 ft. *	Nominal 2 1/2 in. (2.375 in.) OD steel tube or pipe and a maximum post spacing of 6 ft. × 6 ft.
Maximum runners spacing vertically	6 ft. 6 in .....	6 ft. 6 in.....	6 ft. 6 in.

\* Bearers shall be installed in the direction of the shorter dimension.

Note: Longitudinal diagonal bracing shall be installed at an angle of 45° (±5°).

MAXIMUM NUMBER OF PLATFORM LEVELS				
	Maximum number of additional platform levels			Maximum height of scaffold (in feet)
	Light duty	Medium duty	Heavy duty	
Number of Working Levels:				
1 .....	16	11	6	125
2 .....	11	1	0	125
3 .....	6	0	0	125
4 .....	1	0	0	125