

Note No. #1

Attachment:PR DOCS – MAIN –1900141241-FRAME WORK – ANCHOR FASTNERS.pdf

FRAMEWORK AGREEMENT FOR FGD FPS PROJECTS

R00-30.10.2020

Un-Priced Price Bid Format

Item: ANCHOR FASTNERS

PR No: 1900141241

Sl No	PR No	Material Code	Material Description	UOM	PR Qty (No.s)	Technical Specification	Price Weightage Factor	Bidder Confirmation (Quoted)
1	1900141241	PY9752246028	ANCHOR FASTENER M10 X 100	EA	21600	PY52246	0.38082	
2	1900141241	PY9752246052	ANCHOR FASTNERS-M12X125MM LONG	EA	18100	PY52246	0.53131	
3	1900141241	PY9752280021	DRIVE-IN/FLUSH/BULLET ANCHOR M10X40	EA	12200	PY522800	0.08787	
Total							1.00000	

NOTES:

- 1) Vendor to Quote Lumpsum Price for the Total Package.
- 2) Line Item Rates of the individual items shall be derived by multiplying the "Price Weightage Factor" with the Lumpsum Price quoted.
- 3) Unit Rates of the Individual items thus arrived, shall be binding on the bidder, for the total period of Framework Agreement.
- 4) Observations / Objections, if any, of the Bidder, to the "Price Weightage Factor" shall be brought to the notice of BHEL, during Pre-Bid Stage.
- 5) No Observations / Objections shall be entertained after the Techno-Commercial Bid is opened.
- 6) Bidder to indicate "Quoted" in the column "Bidder's Confirmation" as a confirmation of their bid to the respective item.
- 7) The Bid Evaluation is on Overall L1 Basis. Each and Every item of the Package shall be quoted by the bidder.
- 8) Partial offers will not be considered for evaluation and the same are liable for rejection.
- 9) The details of the Projects for which Framework Agreement is proposed are given elsewhere in the NIT. The distribution of the line items across the projects is attached as **Annexure-A**.
- 10) The permissible ordering limits specified in NIT are strictly applicable on the Total Framework Value. The same are not applicable at the Individual Project level.
- 11) The Total Lump price quoted shall be INCLUSIVE of Freight, Packing & Forwarding and Testing Charges.
- 12) The Total Lump price quoted shall be EXCLUSIVE of GST, Third party inspection (TPI) & Insurance Charges.

Note No. #1

Attachment:PR DOCS - MAIN -1900141241-FRAME WORK - ANCHOR FASTNERS.pdf

DISTRIBUTION OF FRAMEWORK ITEMS ACROSS PROJECTS

Annexure-4 to Price Bid Format

ITEM: ANCHOR FASTNERS

PR NO 1900141241

SL NO	Material No	Material Desc	UOM	PMD No	UWT	KOTHAGUDEM	BHADRADRI	NORTH KARANPURA	BARIA-1	BARIA-2	MAUDA	BRCL NABINAGAR	NPGL NABINAGAR	RAMAGUNDAM	KORBA	NSPL BILLAI	TUTICORIN	UDANGUDI	SAGARDIGH	ENMORE	BHUSAWAL	YADADRI	PATRATU	PANXI	CONTINGENCY
1	P1975246028	ANCHOR FASTENER M10 X 100	EA	PE.MP.611	1.5	88	88	88	88	88	88	88	88	88	88	88	88	12932	3988			10000		2900	
2	P1975246052	ANCHOR FASTNERS M12X125MM LONG	EA	PE.MP.611	0.21	900	852	1068	1152	936	900	1068	1068	1068	1068	900	900	2436	2094			5000		4500	
3	P1975280021	DRIVE-IN(PLUSH)BULLET ANCHOR M10X40	EA	PE.MP.611	0.4	482	482	340	482	482	482	340	340	340	340	482	482	1500	4800			5000		1100	

1. The quantities indicated are total quantity with additional 50 % qty variation considered

2. The above list of Quantity , project/customer is tentative only. Final details of quantity, Project/ Customer shall be informed at the time of PO

3. The Project/ Customer are subject to change based on buisness scenario of BHEL.

Note No. #1 Attachment: PR DOCS - MAIN - 1900141241 FRAME WORK - ANCHOR FASTNERS.pdf
BULK PROCUREMENT OF GENERIC PIPING ITEMS
Pre-Qualification Criteria (Technical)

Package Name : ANCHOR FASTNER
PR No : 1900141241

Manufacturers of **ANCHOR FASTNER**, qualified as per the Pre-qualification criteria laid down below, are allowed to bid. Documentary evidence shall be provided by such bidders to establish their claim. **However, offer consideration is subjected to approval from end Customer.**

The bid evaluation shall be on Overall L1 basis. The Bidder shall meet the Pre-Qualification Criteria (listed below.

Non-compliance to any of the criteria listed below will lead to disqualification of bidder for the subject item of the tender.

Qualification Criteria of the Bidder:

1. The bidder should be an established manufacturer of **Anchor fastener** and should have successfully completed Manufacture, Supply of **Anchor fastener**.
2. The Bidder should have successfully completed supply of **Anchor fastener** for similar specification with a total minimum quantity of **35,000 No.s** through a single Purchase Order or multiple Purchase Orders in the last 5 years ending on original due date of this tender, with at least one order executed after 01.01.2019.
3. Detailed BOQ of the items supplied, satisfying the criteria laid down above, shall be provided in the format enclosed as Annexure-1, with details like Project & Customer, Description & Quantity of Items supplied, PO details etc. as a minimum for assessing pre-qualification. **PO Copies, Inspection Reports and Dispatch documents shall be enclosed for the references provided.**
4. The bidder should not have been under suspension for business or blacklisted by any of the BHEL units.

Annexure-1 PQC Criteria

Supply References for the Last 5 Years (dispatch date) from the Original due date of this tender

Enquiry Item No & Description: (To be filled by Bidder)

[illegible]

Note No. #1 Attachment: PR DOCS – MAIN –1900141241-FRAME WORK – ANCHOR FASTNERS.pdf

**Bulk Procurement of Anchor Fastners
Price Variation Formula-ANCHOR FASTNER
PVC-MS-ANCH-GALV**

$$PO = PA \times \left(\left[0.50 \times \frac{MO}{MA} \right] + \left[0.10 \times \frac{GO}{GA} \right] + \left[0.15 \times \frac{FO}{FA} \right] + \left[0.10 \times \frac{LO}{LA} \right] + 0.15 \right)$$

PO	Purchase Order Value, adjusted in accordance with above Price Variation Formula
PA	Purchase Order Value, as per Original Framework Agreement Price

Escalation for Raw Material:

MO	JPC Retail Market Price of "PIG IRON", as on the date of respective Project PO Placement, <i>calculated as an Average of the Prices for Kolkata, Delhi, Mumbai, Chennai regions.</i>
MA	JPC Retail Market Price for "PIG IRON", as on the date of Part-1 bid opening of Framework Agreement Tender, <i>calculated as an Average of the Prices for Kolkata, Delhi, Mumbai, Chennai regions.</i>
As published under the Item "PIG IRON" by Joint Plant Committee, Ministry of Steel, Govt of India, in their subscription based bimonthly publication "JPC MARKET PRICE RETAIL".	

Escalation for Galvanizing:

GO	Wholesale Price Index for "Zinc", as on the date of respective Project PO Placement
GA	Wholesale Price Index for "Zinc", as on the date of Part-1 bid opening of Framework Agreement Tender
As published under the Index "Zinc metal/Zinc blocks" by Office of the Economic Adviser, Ministry of Commerce and Industry, Govt of India, on their website www.eaindstry.nic.in	

Escalation for Fuel & Power:

FO	Wholesale Price Index for "Fuel & Power", as on the date of respective Project PO Placement
FA	Wholesale Price Index for "Fuel & Power", as on the date of Part-1 bid opening of Framework Agreement Tender
As published under the Index "II Fuel & Power" by Office of the Economic Adviser, Ministry of Commerce and Industry, Govt of India, on their website www.eaindstry.nic.in	

Escalation for Labour:

LO	All-India Average Consumer Price Index Number for Industrial Workers (Base_2016=100), as on date of respective Project PO Placement
LA	All-India Average Consumer Price Index Number for Industrial Workers (Base_2016=100), as on the date of Part-1 bid opening of Framework Agreement Tender
As published by Labour Bureau, Ministry of Labour and Employment, Govt of India, on their website www.labourbureau.gov.in	

Overheads and Margin:

0.15	Constant for Overheads and Margin
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NOTE: Latest Index Values, as published by respective agencies, **Available as on the date** of Part-1 bid opening of FA Tender / date of PO, shall be considered, for all the factors.

Note No. #1 Attachment: PR DOCS		MAIN - 1900141241 FRAME WORK ANCHOR FASTNERS.pdf	
Form No:	 PE&SD	BHARAT HEAVY ELECTRICALS LIMITED	
		PROJECT ENGINEERING & SYSTEMS DIVISION	
		PY 52 246	
		TECHNICAL SPECIFICATION	
		CONCRETE STUD ANCHORS	
		Rev. No. 01	
		Page 1 of 3	

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CONCRETE STUD ANCHORS

1.0 INTRODUCTION & SCOPE

- 1.1 The intent of this document is to specify minimum specification requirements for procurement of **Mechanical type Concrete Stud Anchors**.
- 1.2 The purpose of these stud anchors is to fasten the structural plate to concrete. The plate in turn shall be used for supporting purposes. These anchor fasteners may be installed on the bottom/side/top of the concrete. Supplier is to ensure that the stud is suitable for all these applications.
- 1.3 All the codes/standards mentioned in this specification shall be of latest issue.

2.0 INPUTS & STANDARDS

2.1 DESIGN:

- The concrete stud anchors shall be stud type torque controlled mechanical expansion fasteners having 3-way expansion sleeve with nut and washer.
- Type of fixing this anchor fastener shall be Pre-fastening & Through-fastening.
- The concrete stud anchor shall carry cracked concrete and fire approval.
- Anchor must be tested and approved as per Seismic C1 and C2 Category.
- The safe tensile load carrying capacity of the anchors shall be arrived by providing the minimum factor of safety of 2.5 on the characteristic load of the anchor.
- The minimum Load bearing capacity of each individual bolt shall be as per the below table for minimum concrete strength of M20 in cracked concrete.

Sl.no	Size of Anchor Bolt	Effective Anchorage depth (mm)	Tensile Load (kN)	Shear Load (kN)
01	M8	45	2.4	7.4
02	M10	60	4.3	11.3
03	M12	70	7.6	17.1
04	M16	85	11.9	26.9

- Concrete Stud anchors shall be designed as per ETAG-001 code & Supplier shall ensure that anchors shall meet the cracked concrete requirements.
- The Anchor should be third party tested, possess ETA approval and should be pre-assembled with a galvanized nut and washer.

2.2 MATERIAL AND DIMENSIONAL DETAILS:

- The concrete stud anchors shall be of cold formed carbon steel (minimum grade 5.8 as per IS 1367 Part 3), galvanised to minimum 5 microns as per IS 1367 Part 11 / EN ISO 4042 & externally threaded.
- The 3-way expansion sleeve shall be of SS316 material.
- The Size and Length of the Stud Anchor shall be as mentioned in Material description.

Form No:	LAYOUTS & PIPING ENGINEERING	PREPARED	CHECKED	APPROVED	DATE
	PROJECT ENGINEERING & SYSTEMS DIVISION	 PARAMESH	 V UDAY	 SRIKANTH G	20.08.18

Note No. #1	Attachment: PR DOCS	 PE&SD	MAIN-1900141/241- FRAME WORK-ANCHOR FASTNERS .pdf PROJECT ENGINEERING & SYSTEMS DIVISION TECHNICAL SPECIFICATION CONCRETE STUD ANCHORS	BHARAT HEAVY ELECTRICALS LIMITED PY 52 246 Rev. No. 01 Page 2 of 3
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED, It must not be used directly or indirectly in any way detrimental to the interest of the company.		2.3 IMPORTANT NOTES: ▪ Vendors' scope is limited to Supply of mechanical concrete stud anchors. ▪ Applications shall be in Wide range of applications, which includes cracked concrete. ▪ Heavy-duty fastenings in highly safety-relevant or dynamic applications, which includes applications in power plants. ▪ Applications may include e.g. heavy equipment, steel columns, heavy pipe supports, beam supports, cantilevers, etc. ▪ Application of this stud anchors shall be in Minimum concrete strength of M20. The supplied anchor stud should be suitable for this concrete strength as a minimum. ▪ Vendor to follow latest relevant Indian and International Standards for Anchor Fasteners. ▪ Vendor shall furnish the following along with their offer ○ Model of the Stud Anchor being quoted. ○ Catalogue of the Stud Anchor indicating the technical details. ○ Maximum load bearing capacity of Stud Anchor. ▪ Post order, vendor shall furnish the data sheets of Stud anchor for approval along with the installation instructions such as ○ Diameter of hole to be provided in concrete ○ Drill bit to be used ○ Anchor embedment depth & fixing details or any other details necessary for completion of installation at site etc. 3.0 INSPECTION Scope of inspection shall be as called for in the data sheets enclosed / specified in the purchase order / approved quality plan. Inspection agency shall be BHEL / BHEL Third Party Inspection agency. 4.0 TEST CERTIFICATES Three copies of all the test certificates required as per this document shall also be furnished. 5.0 PACKING AND MARKING 5.1 All the items shall be packed suitably in closed wooden cases / hard cardboard boxes, enclosed in a moisture resistant wrapping in order to avoid damage, ingress of moisture & corrosion during transit and storage. Suitable supports shall be provided inside the cases in order to avoid internal movement. Each packing case must contain 2 copies of the shipping list giving details of all the contents of the case. 5.2 The following marking shall be done on each packing case minimum on two sides and also at the top: ▪ Complete address of the consignee and destination as per BHEL Purchase Order. ▪ BHEL Purchase Order Number (c) Number of pieces in each packing case ▪ Net Weight ▪ Gross Weight ▪ Packing case number and total number of packing ▪ Arrow indicating top of the packing case. 6.0 WARRANTY Vendor shall warranty all supplies against the defects due to manufacturing effecting performance for a period of sixty month from the date of supply and shall repair/ replace promptly, without cost, any part or parts of the material that fails within said period.		

Note No. #1	Attachment: PR DOCS	 PE&SD	MAIN-1900141241 FRAME WORK ANCHOR BHARAT HEAVY ELECTRICALS LIMITED PROJECT ENGINEERING & SYSTEMS DIVISION TECHNICAL SPECIFICATION CONCRETE STUD ANCHORS	OR FASTNERS.pdf PY 52 246 Rev. No. 01 Page 3 of 3
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7.0 DOCUMENTATION:

Bidder shall confirm in their bid for compliance in all respect for the submission of documents along with no. of copies (indicated in brackets) to be submitted at various stages to Purchaser as indicated below:

Sl No	Description	Along with Offer	After placement of Order	After Supply completion
1	Leaflet / catalogue for the offered item indicating complete cross sectional arrangement, binding dimensions, bill of materials with material specification details	I (1)		
2	GA Drawing.	I (1)	A (4)	
3	Quality Assurance Plan (QAP)	I (1)	A (4)	
4	Any deviations to this standard	A (1)		
5	Shelf life of each item in scope of supply and recommended storage precautions		I (3)	
6	Test Certificates		I (5)	
7	Warrantee Certificate		I (2)	
8	Installation, maintenance, safety procedures, catalogues, list of spares if any, contact addresses of vendor & dealers, phone nos. etc).		I (2)	I (4)

Note: I : For Information A : For Approval

RECORD OF REVISIONS				
Rev. No.	Date	Revision Details	Revised	Approved
00	20.08.2018	First Issue	--	--
01	02.11.2019	Generally Revised	V UDAY	SRIKANTH G

Form No:	 PE&SD	MAIN - 1900141241 FRAME WORK ANCHOR BHARAT HEAVY ELECTRICALS LIMITED PROJECT ENGINEERING & SYSTEMS DIVISION		FASTNERS.pdf PY 52 280
		TECHNICAL SPECIFICATION FOR		Rev. No. 00
		CONCRETE DRIVE-IN/FLUSH/BULLET ANCHORS		Page 1 of 3

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CONCRETE DRIVE-IN/FLUSH/BULLET ANCHORS

1.0 INTRODUCTION & SCOPE

- 1.1 The intent of this document is to specify minimum specification requirements for procurement of **Concrete Drive-in/ Flush/ Bullet Anchors**.
- 1.2 The purpose of these anchors is to screw-in the threaded tie-rod, after embedding the anchor in concrete. This threaded tie rod is in turn used for fixing of HVAC ducts/ pipe supports/ cable tray supports and other service utilities.
- 1.3 These anchor's shall be inserted into a pre- drilled hole and then fixed in concreted using a setting tool. These anchors shall be installed on the bottom-side of the concrete. Supplier is to ensure that the anchor is suitable for the application.
- 1.4 **Scope of supply shall also include the Setting tool for the Anchors. 1 Setting tool for every 1000 nos of Anchors, subjected to a minimum of 1 setting tool per order, shall be supplied.**
- 1.5 All the codes/standards mentioned in this specification shall be of latest issue.

2.0 INPUTS & STANDARDS

2.1 DESIGN:

- The anchors shall be inserted into a pre- drilled hole in concrete and then embedded in concreted using a setting tool.
- The concrete stud anchor shall carry cracked concrete and fire approval.
- Anchors shall be designed as per ETA code & Supplier shall ensure that anchors shall meet the cracked concrete requirements.
- The minimum Load bearing capacity of each individual bolt shall be as per the below table for minimum concrete strength of M25 in cracked concrete.

Sl.no	Size of Anchor	Tensile Load (kN)	Shear Load (kN)
01	M8	3.3	3.9
02	M10	5.1	4.1
03	M12	7.1	11.1

- Concrete Stud anchors shall be designed as per ETAG-001 code & Supplier shall ensure that anchors shall meet the cracked concrete requirements. The Anchor should be third party tested, possess ETA approval

2.2 MATERIAL AND DIMENSIONAL DETAILS :

- The anchors should be of cold formed carbon steel (minimum grade 5.8 as per IS 1367 Part 3), galvanised to minimum 5 microns as per IS 1367 Part 11 / EN ISO 4042 & internally threaded.
- Technical details of the anchor shall be as follows:
 - Size/length as mentioned in Material description.
 - Threaded – Internally; for fixing a threaded rod.

Form No:	LAYOUTS & PIPING ENGINEERING	PREPARED	CHECKED	APPROVED	DATE
	PROJECT ENGINEERING & SYSTEMS DIVISION	 PARAMESH	 V UDAY	 SRIKANTH G	02.11.19

Note No. #1 Attachment: PR DOCS	Form No:	 PE&SD	CS - MAIN - 1900141241 - FRAME WORK - ANCHOR FASTNERS.pdf PROJECT ENGINEERING & SYSTEMS DIVISION TECHNICAL SPECIFICATION FOR CONCRETE DRIVE-IN/FLUSH/BULLET ANCHORS	PY 52 280 Rev. No. 01 Page 2 of 3
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED, It must not be used directly or indirectly in any way detrimental to the interest of the company. 2.3 IMPORTANT NOTES: - Vendors' scope is limited to Supply of these anchors - Applications shall be in Wide range of applications, which includes cracked concrete. - Anchors should be cold formed carbon steel & Galvanized. Fastenings includes in highly safety-relevant or dynamic applications, which includes applications in power plants. - The internal thread should enable the fixing of conventional threaded rods which are of metric ISO standard thread. - No damage should happen to the thread when tapping in and expanding - Application of this anchors shall be in Minimum concrete strength of M25. The supplied anchor stud should be suitable for this concrete strength as a minimum. - Vendor to follow latest relevant Indian and International Standards for Anchor Fasteners. - Vendor shall furnish the following along with their offer - Model of the Anchor being quoted. - Catalogue of the Anchor indicating the technical details. - Maximum load bearing capacity of Stud Anchor. - Post order, vendor shall furnish the data sheets of Stud anchor for approval along with the installation instructions such as - Diameter of hole to be provided in concrete - Drill bit to be used - Anchor embedment depth & fixing details or any other details necessary for completion of installation at site etc. 3.0 INSPECTION Scope of inspection shall be as called for in the data sheets enclosed / specified in the purchase order / approved quality plan. Inspection agency shall be BHEL / BHEL Third Party Inspection agency. 4.0 TEST CERTIFICATES: Three copies of all the test certificates required as per this document shall also be furnished. 5.0 PACKING AND MARKING 5.1 All the items shall be packed suitably in closed wooden cases / hard cardboard boxes, enclosed in a moisture resistant wrapping in order to avoid damage, ingress of moisture & corrosion during transit and storage. Suitable supports shall be provided inside the cases in order to avoid internal movement. Each packing case must contain 2 copies of the shipping list giving details of all the contents of the case. 5.2 The following marking shall be done on each packing case minimum on two sides and also at the top: - Complete address of the consignee and destination as per BHEL Purchase Order. - BHEL Purchase Order Number (c) Number of pieces in each packing case - Net Weight - Gross Weight - Packing case number and total number of packing - Arrow indicating top of the packing case.				

Note No. #1	Attachment: PR DOCS	 BHEL PE&SD	CS - MAIN - 1900141241 - FRAME WORK - ANCHOR FASTNERS.pdf BHARAT HEAVY ELECTRICALS LIMITED PROJECT ENGINEERING & SYSTEMS DIVISION TECHNICAL SPECIFICATION FOR CONCRETE DRIVE-IN/FLUSH/BULLET ANCHORS		PY 52 280 Rev. No. 01 Page 3 of 3

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6.0 WARRANTY

Vendor shall warranty all supplies against the defects due to manufacturing effecting performance for a period of sixty month from the date of supply and shall repair/ replace promptly, without cost, any part or parts of the material that fails within said period.

7.0 DOCUMENTATION:

Bidder shall confirm in their bid for compliance in all respect for the submission of documents along with no. of copies (indicated in brackets) to be submitted at various stages to Purchaser as indicated below:

Sl No	Description	Along with Offer	After placement of Order	After Supply completion
1	Leaflet / catalogue for the offered item indicating complete cross sectional arrangement, binding dimensions, bill of materials with material specification details	I (1)		
2	GA Drawing.	I (1)	A (4)	
3	Quality Assurance Plan (QAP)	I (1)	A (4)	
4	Any deviations to this standard	A (1)		
5	Shelf life of each item in scope of supply and recommended storage precautions		I (3)	
6	Test Certificates		I (5)	
7	Warrantee Certificate		I (2)	
8	Installation, maintenance, safety procedures, catalogues, list of spares if any, contact addresses of vendor & dealers, phone nos. etc).		I (2)	I (4)

Note: I: For Information

A: For Approval

RECORD OF REVISIONS

Rev. No.	Date	Revision Details	Revised	Approved
00	02.11.2019	First Issue	--	--

Note No. #1

Attachment:PR DOCS – MAIN –1900141241-FRAME WORK – ANCHOR FASTNERS.pdf

 PROJECT ENGINEERING & SYSTEM DIVISION		STANDARD MANUFACTURING QUALITY PLAN				QP. NO.:PESD/QA/ FASTENER/01/18-19					
		PRODUCT: FASTENER				BHEL SPEC: AS PER P.O					
										REV NO: 00	
PAGE 1 OF 3											
SL NO	COMPONENTS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	* D	AGENCY	REMARKS
									P	W	V

1.0 BOUGHT OUT ITEMS													
1.1	FASTENERS	Material batch identification, dimensions and GO & NO-GO check	Major	Visual, dimensional, GO & NO-GO check	Sampling plan IS 1367 : Part 17 (AQL=1, LQ10 = 12, sample size = 32, Ac = 1)	BHEL specification or IS Standard IS 1367 : Part 17	BHEL specification or IS Standard IS 1367 : Part 17	MTC and inspection reports	√	2	2	--	Inspection shall be carried out by main supplier.
2.0 FINAL INSPECTION & TESTING													
2.1	FASTENERS	Visual, Dimensions, GO & NO-GO check	Major	Visual, dimensional, GO & NO-GO check	Sampling plan IS 1367 : Part 17 (AQL=0.65, LQ10 = 25, sample size = 8, Ac = 0)	BHEL Specification /BOQ/ IS Standard	BHEL Specification /BOQ/ IS Standard	Inspection reports	√	2	1	--	
2.2		Chemical & Mechanical Properties, Impact test and Heat Treatment (heat treatment if applicable)	Major	TC Review	One sample per Lot			MTC	√	2	--	1	
LEGEND: P: PERFORM, W: WITNESS, V: TC REVIEW. INDICATE 1 FOR BHEL CQS /BHEL NOMINATED INSPECTION AGENCY/END USER & 2 FOR VENDOR/SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT /CHARACTERISTIC UNDER P, W & V COLUMNS. * FOR ITEMS MARKED ✓ (TICK) IN COLUMN 'D', TEST CERTIFICATES SHALL BE SUBMITTED TO BHEL FOR RECORDS.					APPROVED BY  BHEL QA SIGNATURE & STAMP			APPROVED BY -NA- CUSTOMER'S SIGNATURE & STAMP (if applicable)					

Note No. #1

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 PROJECT ENGINEERING & SYSTEM DIVISION		STANDARD MANUFACTURING QUALITY PLAN						QP. NO.:PESD/QA/ FASTENER/01/18-19						
		PRODUCT: FASTENER						BHEL SPEC: AS PER P.O		REV NO: 00		DATE: 23-02-2019		
										PAGE 2 OF 3				
SL NO	COMPONENTS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	* D	AGENCY P W V				REMARKS
2.3		PMI#	Major	PMI test	Random			IR/TC	√	2	1	1	# If applicable 10 sets shall be witnessed randomly by "1"	
2.4		Galvanization* (mass of zinc coating Thickness of Coating, embrittlement, adherence, finish appearance, etc)	Major	Measurement	As per specification			IR/TC	√	2	-	1		
2.5		BOM Check	Major	Visual	100%			Inspection reports	√	2	1	--		
3.0 PRESERVATION & PACKING														
3.1	FASTENERS	Packing# and markings	Major	Visual	Random	BHEL Specification	BHEL Specification	Packing List	√	2	--	1	#Seaworthy packing for export orders refer note-5.	

LEGEND: P: PERFORM, W: WITNESS, V: TC REVIEW. INDICATE 1 FOR BHEL CQS /BHEL NOMINATED INSPECTION AGENCY/END USER & 2 FOR VENDOR/SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT /CHARACTERISTIC UNDER P, W & V COLUMNS. * FOR ITEMS MARKED ✓ (TICK) IN COLUMN 'D', TEST CERTIFICATES SHALL BE SUBMITTED TO BHEL FOR RECORDS.

APPROVED BY



BHEL QA SIGNATURE & STAMP

APPROVED BY

-NA-

CUSTOMER'S SIGNATURE & STAMP
(if applicable)

Note No. #1

Attachment:PR DOCS – MAIN –1900141241-FRAME WORK – ANCHOR FASTNERS.pdf

 PROJECT ENGINEERING & SYSTEM DIVISION		STANDARD MANUFACTURING QUALITY PLAN				QP. NO.:PESD/QA/ FASTENER/01/18-19							
		PRODUCT: FASTENER				BHEL SPEC: AS PER P.O				REV NO: 00	DATE: 23-02-2019		
										PAGE 3 OF 3			
SL NO	COMPONENTS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	* D	AGENCY P W V			REMARKS

Notes:-

1. This Standard MQP should be read along with specification (Latest revision as per PO), approved drawings & approved datasheet.
2. Drawing/datasheet shall prevail over quality plan for contradiction if any.
3. Any project/customer specific requirements which shall be notified have to be fulfilled by the vendor at the time of execution of order.
4. **NACE requirement:** For items coming under **NACE category**, all tests, reports, MTC and certificates shall be submitted as per **NACE MR0103** requirements.
5. Seaworthy packing shall be **witnessed** BHEL/BHEL nominated inspection agency for overseas project.

Abbreviations:-

MTC	-	Material Test certificate	TC	-	Test Certificate
NDE	-	Non Destructive Examination	CS	-	Carbon Steel
PMI	-	Positive Material Identification			
SS	-	Stainless Steel			
IR	-	Inspection Report			

LEGEND: P: PERFORM, W: WITNESS, V: TC REVIEW. INDICATE 1 FOR BHEL CQS /BHEL NOMINATED INSPECTION AGENCY/END USER & 2 FOR VENDOR/SUB VENDOR AS APPROPRIATE AGAINST EACH COMPONENT /CHARACTERISTIC UNDER P, W & V COLUMNS. * FOR ITEMS MARKED ✓ (TICK) IN COLUMN 'D', TEST CERTIFICATES SHALL BE SUBMITTED TO BHEL FOR RECORDS.	APPROVED BY  BHEL QA SIGNATURE & STAMP	APPROVED BY -NA- CUSTOMER'S SIGNATURE & STAMP (if applicable)
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