

BHEL:: PIPING CENTRE :: CHENNAI – 600017
 OUTSOURCING
 ANNEXURE – I
 SCOPE OF WORK FOR OS CONVERSION RATE CONTRACT: FOR FABRICATION OF
 PIPING & PIPING COMPONENT FOR THE YEAR 2015-16

SCHEDULE-1 -NIBR EP & ATTACHMENT OF PIPE OTHER THAN P91/P92	
[1.1] END CHAMFERING / SQUARECUT/ BOTH END OF - CS / AS / SS / PIPES / FITTINGS / STUBS, MATCHING PIECE MACHINED OUT OF PIPE (OTHER THAN P91 & P92 SPECIFICATION) - NON- IBR	
A	MARKING, TRANSFER OF ATTESTATION, CUTTING AND EDGE PREPARATION /SQUARE CUT OF BOTH THE ENDS OF PIPE/FITTINGS AS PER OUR DRAWINGS, RELEVANT QCP, QP ETC. STRAIGHTTENING AS MAY BE REQUIRED
B	PROVISION OF END PROTECTION AS PER CLAUSE 5.4.F OF THE ENCLOSED TERMS AND CONDITIONS AND AS PER TIP:07.
C	EP OF PIPES INCLUDES, DRILLING, TAPPING OF HOLES AND MOUNTING OF RG PLUGS. IF RG PLUGS ARE NOT SUPPLIED AS STOCK ITEM, CHARGES FOR MACHINING FROM ROUNDS WILL BE PAID EXTRA AS PER ACCEPTED RATE CODE
D	IF PIPE THICKNESS IS ABOVE 28MM AND LENGTH ABOVE 2MTR ADDITIONAL RATE IS PAID FOR HANDLING AS PER RC.
E	FOR MATCHING PIECES MACHINED OUT OF PIPE, RELEVANT EP RATE CODE IS OPERATED.
[1.2] FABRICATION OF PIPE WITH ATTACHMENTS (FOR UNIT WEIGHT MORE THAN 50 KG)- AS – NIBR	
[1.3] FABRICATION OF PIPE WITH ATTACHMENTS (FOR UNIT WEIGHT MORE THAN 50 KG) - CS – NIBR	
[1.4] ATTACHMENTS (FOR UNIT WEIGHT UP TO 50 KG) - AS/CS /SS- IBR/ NIBR	
A	MARKING, TRANSFER OF ATTESTATION, CUTTING AND EDGE PREPARATION OF BOTH ENDS OF PIPE AS PER DRAWING, QCP'S, CQP'S ETC. STRAIGHTTENING AS MAY BE REQUIRED
B	WELDING OF ATTACHMENTS TO MAIN PIPE INCLUSIVE OF FLANGE, END COVER, FITTINGS TO MAIN PIPE [FLANGE, END COVER, FITTINGS WILL ALSO BE TREATED AS ONE ATTACHMENT] AS PER DRAWING, QP.
C	BOTTOM SUPPORT, SADDLE SUPPORT AND CARRIER PLATE WILL ALSO BE TREATED AS ONE ATTACHMENT.
D	ATTACHMENT THAT HAVE STRUCTURAL BEAM, STIFFNER PLATE AND PAD PLATE WILL BE TREATED AS TWO ATTACHMENT.
E	NO PIPE BUTT JOINT RATES WILL BE PAID EXTRA FOR ANY ATTACHMENTS TO THE MAIN PIPE.
F	MPI/ RADIOGRAPHY HEAT TREATMENT AND ANY OTHER TEST IF NECESSARY, AS PER THE RELEVANT QCP.CQP.SQP/TIPS ETC.
G	STENCILING & MARKING AS PER CLAUSE 10.0 OF TERMS AND CONDITIONS.
H	IF FLANGES, TRUNNION, ARE NOT SUPPLIED BY BHEL AS FINISHED COMPONENT BUT ONLY RAW MATERIAL IS SUPPLIED, MACHINING COST WILL BE PAID EXTRA FOR THOSE ATTACHMENT COMPONENT.

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I	SET OF FOUR CARRIER PLATE IS CONSIDERED AS A SINGLE ATTACHMENT. EACH PAD PLATE IS TREATED AS A SINGLE ATTACHMENT.
J	COMPLETE BOTTOM SUPPORT ASSEMBLY AS PER DRAWING IS CONSIDERED AS A SINGLE ATTACHMENT.
K	FABRICATION OF PUDDLE FLANGE AS PER DRAWING, HEAT TREATMENT IS APPLICABLE IF QP CALLS FOR .
L	IN EXTRODINARY CASES, IF FABRICATION COST OF THE PIPE WITH ATTACHMENTS IS LESS THAN THE APPLICABLE 'EP' RATE FOR THE CORRESPONDING PIPE SIZE, 'EP' RATE ALONE WILL BE PAID FOR SUCH DU.
[1.5] WELDED TEES FROM PIPE - NIBR - CS & AS	
A	MARKING, TRANSFER OF ATTESTATION, CUTTING AS PER DRAWING.
B	FABRICATION OF 'T' AS PER DRAWING, QP AND HEAT TREATMENT / NDT AS APPLICABLE.
C	EDGE PREPARATION AS PER DRAWING,
[1.6] MITRE BENDS FROM PIPE (WITH ATTACHMENT LIKE BOTTOM SUPPORT, FLANGE (FREE SUPPLY) AND STUB ,ETC..)	
[1.7] MITRE BENDS FROM PIPE (WITHOUT ATTACHMENT)	
[1.8] MITRE BENDS FROM PIPE (WITH AND WITHOUT ATTACHMENT)	
A	MARKING, TRANSFER OF ATTESTATION, CUTTING AND EDGE PREPARATION AS PER DRAWING.
B	WELDING THE CUT PIPES TO MAKE MITRE BENDS AS PER DRAWING
C	WELDING OF ATTACHMENTS INCLUDING FLANGE [NO EXTRA BUTT WELDING CHARGES WILL BE PAID] , IF ANY, AS PER DRAWING, AND HEAT TREATMENT AS PER QCP/CQP.
D	MPI/ RT AND ANY OTHER TEST IF NECESSARY, AS PER THE RELEVANT QCP/CQP/TIPS ETC
E	STENCILING & MARKING AS PER CLAUSE 10.0 OF TERMS AND CONDITIONS.
F	IF FLANGES NOT SUPPLIED BY BHEL, MACHINING OF COST OF FLANGES WILL BE PAID EXTRA.
G	IF ANY ADDITIONAL LS,CS BUTT JOINTS WARRANTED DUE TO MATERIAL SUPPLY BY BHEL , ADDITIONAL CHARGES WILL BE PAID .
E	PROVIDING STIFFENER PLATE WHEREVER REQUIRED.
F	FOR ATTACHMENTS, RAW MATERIAL WILL BE ISSUED AND MACHINING OF THE SAME IS IN VENDOR'S SCOPE,
[1.9] CUT TO SIZE	
A	CUTTING OF PLATES TO SIZE AS PER DRAWING/PURCHASE ORDER/GMS
B	FABRICATION OF HANGER COMPONENTS LIKE SQUARE .WASHER, SLOTTED HOLE TOP PLATE ETC INVOLVING MINOR MACHINING/DRILLING

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C	GRINDING ALL THE EDGES SMOOTH FREE OF ANY BURRS.
[1.10] BUNDLING & STENCILLING OF BOILERS COMPONENTS	
A	STRAIGHTTENING AS MAY BE REQUIRED.
B	HANDLING, BUNDLING AND STENCILING AS PER PROJECT REQUIREMENT.
C	THIS RATE SCHEDULE WILL BE OPERATED WHERE NO MAJOR WORK LIKE GAS CUTTING, MACHINING ETC IS INVOLVED.
D	THE ITEMS COVERED ARE LIKE STRUCTURALS , PIPES WITH UNIT AS RUNNING METRE AND PLATES IN SQUARE METRE AND PIPES (SUPPORT PIPE , SPARE PIPE)
[1.11] CONDENSING LOOP ASSY / U TUBE ASSY(CS / AS)	
A	FABRICATION OF CONDENSING LOOP ASSY / U TUBE ASSY AS PER DRAWING / QP.
SCHEDULE-2- IBR - EP & ATTACHMENT OF PIPE	
[2.1] END CHAMFERING / SQUARECUT/ BOTH END OF - CS/AS/ SS - PIPES / FITTINGS / STUBS, MATCHING PIECE MACHINED OUT OF PIPE (OTHER THAN P91 & P92	
A	MARKING, TRANSFER OF ATTESTATION, CUTTING AND EDGE PREPARATION /SQUARE CUT OF BOTH THE ENDS OF PIPE/FITTINGS AS PER OUR DRAWINGS, RELEVANT QCP,QP ETC. STRAIGHTTENING AS MAY BE REQUIRED.
B	PROVISION OF END PROTECTION AS PER CLAUSE 5.4.F OF THE ENCLOSED TERMS AND CONDITIONS AND AS PER TIP:07.
C	EP OF PIPES INCLUDES, DRILLING, TAPPING OF HOLES AND MOUNTING OF RG PLUGS. IF RG PLUGS ARE NOT SUPPLIED AS STOCK ITEM, CHARGES FOR MACHINING FROM ROUNDS WILL BE PAID EXTRA AS PER ACCEPTED RATE CODE
D	IF PIPE THICKNESS IS ABOVE 28MM AND LENGTH ABOVE 2MTR ADDITIONAL RATE IS PAID FOR HANDLING AS PER RC.
E	FOR MATCHING PIECES MACHINED OUT OF PIPE, RELEVANT EP RATE CODE IS OPERATED.
[2.2] FABRICATION OF PIPE WITH ATTACHMENTS (FOR UNIT WEIGHT MORE THAN 50 KG) - AS - IBR	
[2.3] FABRICATION OF PIPE WITH ATTACHMENTS (FOR UNIT WEIGHT MORE THAN 50 KG)- CS - IBR	
A	MARKING, TRANSFER OF ATTESTATION, CUTTING AND EDGE PREPARATION OF BOTH ENDS OF PIPE AS PER DRAWING, QCP'S, CQP'S ETC.
B	WELDING OF ATTACHMENTS TO MAIN PIPE INCLUSIVE OF FLANGE, END COVER, FITTINGS TO MAIN PIPE [FLANGE, END COVER, FITTINGS WILL ALSO BE TREATED AS ONE ATTACHMENT] AS PER DRAWING, QP.
C	BOTTOM SUPPORT, SADDLE SUPPORT AND CARRIER PLATE WILL ALSO BE TREATED AS ONE ATTACHMENT.
D	ATTACHMENT THAT HAVE STRUCTURAL BEAM, STIFFNER PLATE AND PAD PLATE WILL BE TREATED AS TWO ATTACHMENT.
E	NO PIPE BUTT JOINT RATES WILL BE PAID EXTRA FOR ANY ATTACHMENTS TO THE MAIN PIPE.

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F	MPI/ RADIOGRAPHY HEAT TREATMENT AND ANY OTHER TEST IF NECESSARY, AS PER THE RELEVANT QCP.CQP.SQP/TIPS ETC.
G	STENCILING & MARKING AS PER CLAUSE 10.0 OF TERMS AND CONDITIONS.
H	IF FLANGES, TRUNNION, ARE NOT SUPPLIED BY BHEL AS FINISHED COMPONENT BUT ONLY RAW MATERIAL IS SUPPLIED, MACHINING COST WILL BE PAID EXTRA FOR THOSE ATTACHMENT COMPONENT.
I	SET OF FOUR CARRIER PLATE IS CONSIDERED AS A SINGLE ATTACHMENT. EACH PAD PLATE IS TREATED AS A SINGLE ATTACHMENT.
J	COMPLETE BOTTOM SUPPORT ASSEMBLY AS PER DRAWING IS CONSIDERED AS A SINGLE ATTACHMENT.
K	FABRICATION OF PUDDLE FLANGE AS PER DRAWING, HEAT TREATMENT IS APPLICABLE IF QP CALLS FOR .
L	IN EXTRODINARY CASES, IF FABRICATION COST OF THE PIPE WITH ATTACHMENTS IS LESS THAN THE APPLICABLE 'EP' RATE FOR THE CORRESPONDING PIPE SIZE, 'EP' RATE ALONE WILL BE PAID FOR SUCH DU.
[2.4] WELDED TEES FROM PIPE - IBR - CS & AS	
A	MARKING, TRANSFER OF ATTESTATION, CUTTING AS PER DRAWING.
B	FABRICATION OF 'T' AS PER DRAWING, QP AND HEAT TREATMENT / NDT AS APPLICABLE.
C	EDGE PREPARATION AS PER DRAWING,
SCHEDULE-3- P91/ P92 PIPE EP & MACHINING OF P91/P92 COMPONENTS	
[3.1] END CHAMFERING / SQUARECUT/ BOTH END OF - P91, P92- PIPES / FITTINGS / STUBS, MATCHING PIECE MACHINED OUT OF PIPE	
A	MARKING, TRANSFER OF ATTESTATION, CUTTING AND EDGE PREPARATION /SQUARE CUT OF BOTH THE ENDS OF PIPE/FITTINGS AS PER OUR DRAWINGS, RELEVANT QCP,QP ETC
B	PROVISION OF END PROTECTION AS PER CLAUSE 5.4.F OF THE ENCLOSED TERMS AND CONDITIONS AND AS PER TIP:07.
C	EP OF PIPES INCLUDES, DRILLING, TAPPING OF HOLES AND MOUNTING OF RG PLUGS. IF RG PLUGS ARE NOT SUPPLIED AS STOCK ITEM, CHARGES FOR MACHINING FROM ROUNDS WILL BE PAID EXTRA AS PER ACCEPTED RATE CODE
D	IF PIPE THICKNESS IS ABOVE 28MM AND LENGTH ABOVE 2MTR ADDITIONAL RATE IS PAID FOR HANDLING AS PER RC.
E	FOR MATCHING PIECES MACHINED OUT OF PIPE, RELEVANT EP RATE CODE IS OPERATED.
[3.2] MACHINING OF P91/P92 COMPONENTS	
A	CUTTING OF RODS, MACHINING / THREADING OF THE RODS WITH BHEL RAW MATERIAL AS PER DRAWING.
B	ELECTRO-GALVANIZING AND YELLOW-CHROMATIZING, WHEREVER REQUIRED AS PER THE DRAWING AND RELEVANT QCP
C	APPLYING RUST PREVENTIVE OIL ON THE THREADED PORTION AND PAINTING OF THE REMAINING PORTION AS PER CLAUSE 10.0 OF TERMS AND CONDITIONS.

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D	FABRICATION / MACHINING / THREADING / PARTS AS PER APPLICABLE DRAWING, QP ETC.
[3.3] P91/P92 UT REFERENCE BLOCK / HARDNESS BLOCK	
A	MANUFACTURING AND TESTING OF P91 REFERENCE BLOCKS SHALL BE AS PER THE APPLICABLE DRAWING.
B	AT MOST CARE SHALL BE TAKEN W.R.T BLOCK DIMENSIONS, SURFACE FINISH, NOTCH LOCATION & SIZE .THE TOLERANCES SHALL BE AS PER THE APPLICABLE DRAWING.
C	CIRCUMFERENTIAL & AXIAL REFERENCE BLOCKS SHALL BE IDENTIFIED BY HARD PUNCHING OF PIPE OD, THICKNESS & SPECIFICATIONS ON END FACE ONLY. NO HARD PUNCH IS ALLOWED ON PIPE SURFACES.
D	ALL THE FINISHED ITEMS SHOULD BE CALIBRATED BY THE VENDOR IN ANY 'NABL' APPROVED LABORATORY AT VENDOR'S COST.
SCHEDULE- 4 - PLATE FORMED PRODUCT - IBR/NIBR	
[4.1] PUDDLE FLANGE MADE OUT OF PLATE	
A	FABRICATION OF PIPE FROM PLATE
B	FABRICATION OF PUDDLE FLANGE AND HEAT TREATMENT IF APPLICABLE.AS PER DRAWING AND QP.
[4.2] FABRICATION OF MANHOLE ASSEMBLY - CS – NIBR	
[4.3] MITRE BENDS FROM PLATE / WELDED TEE (MAIN PIPE-SIZE) FROM PLATE / Y-PIECE FROM PLATE (WITHOUT AND WITH ATTACHMENT LIKE BOTTOM SUPPORT, FLANGE (FREE SUPPLY) AND STUB, ETC..)	
[4.4] MITRE BENDS FROM PLATE - SS (WITH AND WITHOUT ATTACHMENT , INCLUSIVE OF PLASMA CUTTING AND PASSIVATION)	
[4.5] & [4.8] PLATE FORMED ITEMS - WITHOUT ATTACHMENT (INVOLVES ROLLING OF PLATES,LS WELDING & SQUARE CUT/EP) - CS & AS – NIBR/IBR	
[4.6] & [4.9] PLATE FORMED ITEMS - WITH ATTACHMENT (INVOLVES ROLLING OF PLATES,LS WELDING & SQUARE CUT/EP) - CS & AS – NIBR/IBR	
[4.7] PLATE FORMED REDUCERS AND FUNNEL (INVOLVES ROLLING OF PLATES,LS WELDING & SQUARE CUT/EP) - CS & AS – NIBR	
A	MARKING, TRANSFER OF ATTESTATION, CUTTING AS PER DRAWING.
B	ROLLING/BENDING THE PLATE TO FORM THE REQUIRED SIZE OF PIPE.
C	WELDING THE SEAM AS PER DRAWING
D	MARKING, CUTTING AND EDGE PREPARATION OF PIPE AS PER DRAWING

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E	WELDING THE CUT PIPES TO MAKE MITRE BENDS AS PER DRAWING
F	WELDING OF ATTACHMENTS INCLUDING FLANGE [NO EXTRA BUTT WELDING CHARGES WILL BE PAID] , IF ANY, AS PER DRAWING, AND HEAT TREATMENT AS PER QCP/CQP.
G	MPI/ RT AND ANY OTHER TEST IF NECESSARY, AS PER THE RELEVANT QCP/CQP/TIPS ETC.
H	STENCILING & MARKING AS PER CLAUSE 10.0 OF TERMS AND CONDITIONS.
I	IF FLANGES NOT SUPPLIED BY BHEL, MACHINING OF COST OF FLANGES WILL BE PAID EXTRA.
J	IF ANY ADDITIONAL LS,CS BUTT JOINTS WARRANTED DUE TO MATERIAL SUPPLY BY BHEL , ADDITIONAL CHARGES WILL BE PAID .
K	PROVIDING STIFFENER PLATE WHEREVER REQUIRED.
L	FOR ATTACHMENTS, RAW MATERIAL WIL BE ISSUED AND MACHINING OF THE SAME IS IN VENDOR'S SCOPE,
M	FOR FUNNEL PIPE WILL BE SUPPLIED AS RAW MATERIAL FOR BOTH END TO BE WELDED WITH THE REDUCER (MIDDLE PART) AND PLATE WILL BE SUPPLIED WHICH SHOULD BE ROLLED AS REDUCER FOR THE MIDDLE PART.
N	IN CASE OF PLATE FORMED PIPE WHERE LIFTING LUG AND STIFFNERS NEED TO BE PROVIDED AS PER THE DRAWING (SINCE IT IS MEANT FOR TRANSPORTATION PURPOSE ONLY TO AVOID PIPE DAMAGE) PLATE FORMED ITEMS WITHOUT ATTACHMENT RATE ONLY WILL BE CONSIDERED.
O	FOR C.S. PF PIPES HT REQUESTED FOR THK 19 MM AND ABOVE (AS PER GENERAL QP) AND IN CASE ANY SPECIFIC CUSTOMER REQUIREMENT OTHER THAN THE ABOVE HT CHARGES WILL BE PAID EXTRA.
SCHEDULE-5- MACHINING / MACHNG & ATT - NIBR/IBR OTHER THAN P91/P92	
[5.1] TARGET PLATE / TARGET PLATE ASSEMBLY	
A	MANUFACTURE OF TARGET PLATE, GRINDING AND BUFFING TO MIRROR FINISH AS PER APPLICABLE DRAWING
B	FABRICATION OF TARGET PLATE ASSY AS PER APPLICABLE DRAWING AND QP. TARGET PLATE WILL BE ISSUED IN FINISHED CONDITION.
C	NO SEPERATE CHARGE WILL BE PAID FOR PLASMA CUTTING.
D	IF PLATE HAS BEEN GIVEN IN PLACE OF PIPE THEN PIPE MANUFATURING CHARGE WILL BE PAID EXTRA.
[5.2] ORIFFICE PLATE / ORIFFICE PLATE ASSY-MACHINING - SS / CS / AS – NIBR [5.3] ORIFFICE PLATE / ORIFFICE PLATE ASSY-ATTACHMENT - SS / CS / AS - NIBR [5.4] MACHINING ITEMS / PART PROCESSING FOR SHOP ASSEMBLIES [5.5] MACHINING / ATTACHMENT-NON-IBR [5.6] ORIFFICE PLATE / ORIFFICE PLATE ASSY-MACHINING - SS / CS / AS – IBR [5.7] ORIFFICE PLATE / ORIFFICE PLATE ASSY-ATTACHMENT - SS / CS / AS – IBR [5.8] MACHINING ITEMS / PART PROCESSING FOR SHOP ASSEMBLIES - IBR	
A	MARKING, TRANSFER OF ATTESTATION, CUTTING AS PER DRAWING.
B	FABRICATION OF ORIFICE PLATE / ORFICE PLATE ASSY AS PER DRAWING, QP

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C	CUTTING OF RODS, MACHINING / THREADING OF THE RODS, SUSPENSION BOLTS, PRECISION STUDS ETC WITH BHEL RAW MATERIAL AS PER DRAWING.
D	ELECTRO-GALVANIZING AND YELLOW-CHROMATIZING, WHEREVER REQUIRED AS PER THE DRAWING AND RELEVANT QCP
E	APPLYING RUST PREVENTIVE OIL ON THE THREADED PORTION AND PAINTING OF THE REMAINING PORTION AS PER CLAUSE 10.0 OF TERMS AND CONDITIONS.
F	FABRICATION / MACHINING / THREADING / WELDING OF COMPONENTS / PARTS AS PER APPLICABLE DRAWING, QP ETC.
SCHEDULE-6 - SPECIAL MACHINING COMPONENTS	
[6.1] RIGID STRUT (INCLUSIVE OF ALL MACHINING , GALVANISING & SPECIAL PAINTING)	
A	FABRICATION OF RIGID STRUT ASSEMBLY AS PER DRAWING WITH BHEL RAW MATERIALS AND PAINTING AS PER THE RELEVANT QCP/DRAWINGS.
B	THE ROD ENDS WILL BE ISSUED BY BHEL AS FINISHED COMPONENTS.
C	THE RATE TO BE QUOTED SHALL BE INCLUSIVE OF CHARGES FOR MACHINING, HEAT TREATMENT, GALVANIZING AND YELLOW- CHROMATIZING OF STUDS AND EPOXY BASED SPECIAL PAINTING OF AS PER SQP/DRG.
[6.2] TIE ROD - R H THREAD ON BOTH SIDE , LH ON ONE SIDE AND RH ON OTHER SIDE WITH GALVANISING TO THK 15 MICRONS AND YELLOW CHROMATISING.	
[6.3] TIE ROD - FULLY THREADED WITH GALVANISING TO THK 15 MICRONS AND YELLOW CHROMATISING.	
A	CUTTING OF RODS, MACHINING / THREADING OF THE RODS, WITH BHEL RAW MATERIAL AS PER DRAWING.
B	ELECTRO-GALVANIZING AND YELLOW-CHROMATIZING, WHEREVER REQUIRED AS PER THE DRAWING AND RELEVANT QCP
C	APPLYING RUST PREVENTIVE OIL ON THE THREADED PORTION AND PAINTING OF THE REMAINING PORTION AS PER CLAUSE 10.0 OF TERMS AND CONDITIONS.
[6.4] MISCELLANEOUS FABRICATIONS / WELD ON CLEVIS & CLEVIS WITH BOLT ASSY	
A	RATE CODE UNDER THIS CATEGORY IS APPLICABLE WHEN NO SPECIFIC RATE CODE ARE AVAILABLE FOR THE DU
B	FABRICATION OF DU / COMPONENT / PART AS PER APPLICABLE DRAWING AND QP.
SCHEDULE-7 -TANKS & VESSELS -IBR/NIBR	
[7] TANKS, VESSELS & DISHED ENDS	
A	FABRICATION OF VESSELS AND ACCESSORIES LIKE SUPPORT, FOUNDATION BOLTS ETC. IN ACCORDANCE WITH THE DRAWINGS ISSUED BY BHEL, OUT OF RAW MATERIALS AND / OR COMPONENTS SUPPLIED AS FREE ISSUE BY BHEL. ADDITIONAL CS, LS BUTT JOINTS CHARGES EXTRA BASED ON THE APPROVED CUTTING PLAN. DISHED ENDS TO BE SUPPLIED AS FINISHED COMPONENT BY BHEL. IF RAW MATERIAL IS SUPPLIED INSTEAD OF FINISHED DISHED END, ADDITIONAL CHARGES WILL BE PAID EXTRA AGAINST APPLICABLE RATE CODE FOR MAKING DISHED ENDS.

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B	MANUFACTURE AND SUPPLY OF DISHED ENDS AS PER BHEL DRG AND QP.
C	MANUFACTURING, RADIOGRAPHIC TESTING AND HYDRAULIC TESTING SHALL BE CARRIED OUT AS PER RELEVANT QCPS, SQP/CQPS, TIPS ETC.
D	HEAT TREATMENT FOR TANK ASSEMBLY AS A WHOLE IF ANY WILL BE PAID ETC.
SCHEDULE-8- CLAMPS	
[8] CLAMPS (AS / CS) / ROD TYPE CLAMP/ CLAMP MADE OUT OF PLATE	
A	FABRICATION OF C.S./A.S. CLAMP ASSEMBLIES, WITH BHEL RAW MATERIALS AS PER DRAWINGS AND QCP/SQP/CQPS.
B	MPI & LPI WHEREVER REQUIRED OR AS CALLED FOR IN THE QCP/CQP/SQP/TIP.
C	HEAT TREATMENT AS PER QCP/CQP/SQP.
D	ASSEMBLING THE CLAMPS AS PER DRAWING
E	FOR ROD TYPE CLAMP MARKING AND CUTTING OF RODS AS PER DRAWING BENDING OF ROD FOR THE FORMATION OF CLAMP, HEAT TREATMENT AS PER APPLICABLE DRAWING / QP THREADING AT THE BOTH ENDS AS PER DRAWING.
SCHEDULE-9- WELDED BEAM & WELDED BOX	
[9] WELDED BEAM , COLLECTING BEAM & WELDED BOX	
A	MARKING, CUTTING AND EDGE PREPARATION AS PER DRAWING.
B	WELDING THE PLATES TO FORM WELDED BEAMS/ BOXES AS PER DRAWING AND BUTT JOINTS TO BUILD UP LENGTHS, INCLUDING WELDING OF SPLICE PLATE.
C	MPI/ LPI /RT AND HEAT TREATMENT WHEREVER REQUIRED, AS PER QCP, TIPS.
SCHEDULE-10- PIPE BENDING	
[10] BENDING OF PIPE	
A	MARKING, TRANSFER OF ATTESTATION AND CUTTING AS PER DRAWING
B	BENDING OF PIPES AND TUBES AS PER BHEL DRAWING AND QCP AND CARRYING OUT HEAT TREATMENT IF APPLICABLE.
C	EDGE PREPARATION AS PER DRAWING
SCHEDULE-11- EXTRA RATE SCHEDULE	
[11.1] HANDALING OF HIGH THK PIPE	
A	APPLICABLE ONLY FOR PIPE NOT APPLICABLE FOR PIPE WITH ATTACHMENT

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[11.2] SS MATERIAL COST	
A	ONLY WEIGHT OF FINISHED COMPONENT WEIGHT AS PER GMS / DRAWING WILL BE CONSIDERED.
[11.3] PLASMA CUTTING	
A	MARKING AND PLASMA CUTTING OF PLATES AS PER DRAWING AND FINISHING THE CUT EDGES WITH GRINDING.
[11.4] ADDITIONAL PLATES BUTT JOINTS (AS / CS / SS) [11.5] ADDITIONAL PIPE BUTT JOINTS (AS / CS)	
A	EDGE PREPARATION / SQUARE CUT OF THE PIPES/STRUCTURES AS PER DRAWING/QCP.
B	ROOT WELDING BY TIG
C	WELDING AS PER THE DRAWING/QCP
D	HEAT TREATMENT AS PER THE DRAWING/QCP
E	LPI/MPI/RADIOGRAPHY AS PER THE DRAWING/ QCP/QP
[11.6] HEAT TREATMENT	
A	HEAT TREATMENT AS PER DRAWING / QP.
[11.7] GALVANISING, CHROMOTISING & THREADING	
A	THREADING / GALVANIZING / CHROMOTISING OF TUBES / PIPES / COMPOENETS AS PER DRAWINGS & QP
[11.8] PAINTING CATEGORY	
A	PAINTING SHALL BE AS PER APPLICABLE PAINTING SCHEMES OR AS PER QP/DRG.
B	SURFACE PREPARATION WITH POWER OPERATED WIRE BRUSH/ BLAST CLEANING AS PER PAINTING Q.P.
C	THE COST OF PRIMER COATING WITH SPECIAL PAINT LIKE EPOXY, INORGANIC, COAL TAR , ALUMINIUM ETC. IS INCLUSIVE OF SURFACE PREPARATION [BLAST CLEANING] AS PER QP. FOR RED OXIDE ALONE [RATE CODE: 8364] SURFACE PREPARATION IS INCLUSIVE OF POWER TOOL CLEANING ONLY. NOTE: IN SOME OF OUR PAINTING QP THOUGH CLEANING PROCESS IS SHOWN AS POWER TOOL CLEANING WHERE THE PRIMER IS ALMUNIUM PAINT FOR THOSE CASES ALSO BLAST CLEANING TO BE DONE.
D	PUNCHING AND STENCILING OF WORK ORDER NUMBER, DU NUMBER, QTY, WEIGHT, SUBCONTRACTOR'S CODE ETC., AS PER CLAUSE 10.0 OF THE ENCLOSED TERMS, AND CONDITIONS.
E	PROVIDING END CAPS, VCI PELLETS (DOSAGE:100GRAMS/CU.M) AND PACKING AS PER OUR LATEST QCP.
F	FOR ITEMS COMING UNDER THE PURVIEW OF IBR INVOLVING PAINTING ONLY, ALL IBR FORMALITIES TO BE STRICTLY FOLLOWED.

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 PIPING & PIPING COMPONENT FOR THE YEAR 2015-16**

G	RATES ARE TO BE INDICATED AS PER THE SCHEDULES WHICH WILL BE OPERATED. FOR ANY VARIATIONS IN PAINTING THICKNESS REQUIRED AS PER PROJECT REQUIREMENT, PROPORTIONATE RATES ON THE AGREED RATE SCHEDULES WILL OPERATED.
H	IF ANY COMPONENT HAS FUTHER OPERATIONS LIKE CUTTING, WELDING AT SITE, FOR THAT TWO COAT OF RED OXIDE PAINT WILL BE APPLICABLE. SUCH COMPONENTS ARE SUPPORT PIPE, SPARE PIPE , PLATE ISSUED IN SQM ETC.
I	FOR INSIDE PAINTING CASE ,IF PIPE HAS BE WELD AT SITE. THEN 100 MM EACH SIDE SHOULD BE LEFT BLANK.ENABLING THAT PORTION PAINTING WILL BE CARRIED OUT AT/BY SITE AFTER SITE WELDING.
SCHEDULE-12- MACHINING OF WELDED TEES(IBR/NIBR)	
[12.1] WELDED TEES BASE PIPE (SPEC-F11,F22,SA105,SA106GRB & SA106GRC)	
[12.2] WELDED TEES BASE PIPE (SPEC-F91 & P91/P92)	
A	MARKING, TRANSFER OF ATTESTATION, CUTTING AND EDGE PREPARATION /SQUARE CUT OF BOTH THE ENDS OF PIPE/FORGING (INCLUDING ID/OD MACHINING) AS PER BHEL DRAWINGS, RELEVANT QCP,QP ETC
B	PROVISION OF END PROTECTION AS PER CLAUSE 5.4.F OF THE ENCLOSED TERMS AND CONDITIONS AND AS PER TIP:07.
C	DRILLING AND ENLARGING BRANCH OPENING AS PER DRAWING.
[12.3] WELDED TEES BRANCH PIPE (SPEC-F11,F22,SA105,SA106GRB & SA106GRC)	
[12.4] WELDED TEES BRANCH PIPE (SPEC-F91 & P91/P92)	
A	MARKING, TRANSFER OF ATTESTATION, CUTTING AND EDGE PREPARATION /SQUARE CUT AT SINGLE END OF PIPE/ FORGING (INCLUDING ID/OD MACHINING) AS PER BHEL DRAWINGS, RELEVANT QCP,QP ETC
B	PROVISION OF END PROTECTION AS PER CLAUSE 5.4.F OF THE ENCLOSED TERMS AND CONDITIONS AND AS PER TIP:07.
C	PROFILE MACHINING AND CHAMFERING ON OTHER SIDE AS PER DRAWING.
GENERAL	
A	STENCILING & MARKING AS PER CLAUSE 10.0 OF TERMS AND CONDITIONS.
B	NOTE : AS – ALLOY STEEL REFERRED IS UP TO P22 / F22 / GR-22
C	PROVISION OF END PROTECTION AS PER CLAUSE 5.4.F OF THE ENCLOSED TERMS AND CONDITIONS AND AS PER TIP:07.
D	IN CASE OF SPARE PIPE OR SPOOL PIPE WHERE SQUARE CUTTING IS INVOLVED 50% OF THE RELEVANT EP RATE WILL BE OPERATED PER CUTTING
E	ALL PIPE ENDS SHALL BE PROVIDED WITH END CAPS/PROTECTION IN ACCORDANCE WITH RELEVANT QCP. COST OF END CAPS IS INCLUSIVE.
F	PROVIDING SILICA-GEL AS PER QCP

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