

**SALES ORDER REQUISITION &
SUPPLY OF REBOILERS**

ChemDist Process Solutions Pvt Ltd

| | |
|---------|-------------|
| QRN No. | QRN:8267 R2 |
| Type. | |
| Job No. | SO – 677 |
| Date | 05/09/2022 |
| Rev | R0 |

Address:
Plot No J-174/1, J-Block,
PCNTDA, Bhosari, Pune-411026,
Maharashtra
Mobile: +91-9545500345
Email: info@chemdist.in

1.0 SCOPE OF SUPPLY :

Our scope of supply includes Manufacturing & Supply of below listed items:

| Sr No | Tag No | MFR Sr No | Qty |
|-------|---------|---------------------|-----|
| 1 | HE - 30 | CDPS-677-E1989-2022 | 1 |
| 2 | HE – 35 | CDPS-677-E1990-2022 | 1 |
| 3 | HE – 75 | CDPS-677-E1991-2022 | 1 |

1. KETTLE RE-BOILER HE-30

| Process Data Sheet | | | |
|--|--|-----------------|--------|
| | Shell Side | Tube Side | |
| Design Pressure (Kg/cm ² g) | Shell Side – 3.5 | Tube Side – 6 | |
| Design Temperature (Deg C) | Shell Side – 200 | Tube Side – 200 | |
| CONSTRUCTION DATA | | | |
| Gross Heat transfer area – 30 m ² , Two pass on Tube Side | | | |
| Kettle Details - | | | |
| Kettel Shell | 12 mm Thk X 1750 mm ID X 3500 mm Long | Qty. | 1 No. |
| MOC | IS 2062 E 250 BR | | |
| Dish End | 2:1 Ellipsoidal | Thk | 12 mm |
| MOC | IS 2062 E 250 BR | Qty. | 2 Nos. |
| Bonnet Shell | 8 mm Thk X 500 mm ID X (350 mm F) Long | Thk. | 8 mm |
| MOC | IS 2062 E 250 BR | Qty. | 1 Nos. |
| Dish End | 2:1 Ellipsoidal | Thk | 8 mm |
| MOC | IS 2062 E 250 BR | Qty. | 1 Nos. |

| Tube Sheet Details - | | | |
|------------------------|--------------|------------|-----------------|
| OD | 650 mm OD | Thk | 28 mm |
| MOC | MS | Qty. | 1 Nos. |
| Tube Details - | | | |
| Type | Smooth | MOC | CS |
| Size | 25.4 mm OD | Thk | 2.11 mm thk |
| Length | 3000 mm | QTY. | 126 |
| Body flanges - | | | |
| OD | 650 mm OD | Thk. | 38 mm |
| Qty. | 2 Nos. | MOC | IS 2062 |
| Gasket for body flange | 3 mm PTFE | | |
| Support Plate | Qty – 2 nos. | MOC | IS 2062 E250 BR |
| Tie rod | Qty – 6 nos | MOC | IS 2062 E250 BR |
| Saddle Support | Qty – 2 Nos. | MOC | IS 2062 E250 BR |
| Lifting Lug MOC | Qty – 2 Nos. | MOC | IS 2062 E250 BR |
| | Tube Side | Shell Side | |
| Nozzle Pipe MOC | MS | MS | |
| Nozzle Flange MOC | MS | MS | |

NOZZLE DETAILS:

| No. | Nozzle | Service | Size (NB) | Sch/Thk | Qty. | Type |
|-----|--------|-------------------------------|-----------|----------|------|-----------|
| 1 | N1 | FEED FROM COLUMN | 300 | 12mm Thk | 1 | SORF #150 |
| 2 | N1A | FEED FROM COLUMN FOR DIP PIPE | 150 | SCH 40 | 1 | SORF #150 |
| 3 | N3 | TEMPERATURE INDICATOR | 100 | SCH 40 | 1 | SORF #150 |
| 4 | N4 | LEVEL INDICATOR (RADAR TYPE) | 150 | SCH 40 | 1 | SORF #150 |
| 5 | N7 | TUBE SIDE CONDENSATE OUTLET | 40 | SCH 40 | 1 | SORF #150 |
| 6 | N8 | TUBE SIDE STEAM INLET | 100 | SCH 40 | 1 | SORF #150 |
| 7 | LG1/2 | LEVEL GAUGE (GLASS TYPE) TUBE | 150 | SCH 80 | 1 | SORF #150 |

| | | | | | | |
|----|---------|--|-----|-----------|---|-----------|
| 8 | N12 | PRESSURE INDICATOR/TRANSMITTER | 150 | SCH 80 | 1 | SORF #150 |
| 9 | N13 | LIQUID OUTLET | 150 | SCH 40 | 1 | SORF #150 |
| 10 | N14 A/B | LIQUID DRAIN | 150 | SCH 40 | 1 | SORF #150 |
| 11 | N15 | VAPOR RETURN TO COLUMN | 400 | 12 mm Thk | 1 | SORF #150 |
| 12 | N16 | PRESSURE EQUILISATION LINE/FRESH BENZENE INLET | 100 | SCH 40 | 1 | SORF #150 |
| 13 | N17 | LOW LEVEL SWITCH | 150 | SCH 40 | 1 | SORF #150 |
| 14 | M | MANHOLE + B.F. WITH DAVIT | 550 | 12 mm Thk | 1 | SORF #150 |

2. KETTLE RE-BOILER HE-35

Process Data Sheet

| | Shell Side | Tube Side |
|--|------------------|-----------------|
| Design Pressure (Kg/cm ² g) | Shell Side – 3.5 | Tube Side – 6 |
| Design Temperature (Deg C) | Shell Side – 200 | Tube Side – 200 |

CONSTRUCTION DATA

Gross Heat transfer area – 35 m² , Two pass on Tube Side

Kettle Details -

| | | | |
|--------------|--|------|--------|
| Kettel Shell | 12 mm Thk X 1820 mm ID X 3500 mm Long | Qty. | 1 No. |
| MOC | IS 2062 E 250 BR | | |
| Dish End | 2:1 Ellipsoidal | Thk | 12 mm |
| MOC | IS 2062 E 250 BR | Qty. | 2 Nos. |
| Bonnet Shell | 8 mm Thk X 520 mm ID X (350 mm F) Long | Thk. | 8 mm |
| MOC | IS 2062 E 250 BR | Qty. | 1 Nos. |
| Dish End | 2:1 Ellipsoidal | Thk | 8 mm |
| MOC | IS 2062 E 250 BR | Qty. | 1 Nos. |

Tube Sheet Details -

| | | | |
|-----|-----------|------|--------|
| OD | 670 mm OD | Thk | 28 mm |
| MOC | MS | Qty. | 1 Nos. |

Tube Details -

| | | | |
|--------|------------|------|-------------|
| Type | Smooth | MOC | CS |
| Size | 25.4 mm OD | Thk | 2.11 mm thk |
| Length | 3000 mm | QTY. | 148 |

Body flanges -

| | | | |
|------------------------|--------------|------|-----------------|
| OD | 670 mm OD | Thk. | 38 mm |
| Qty. | 2 Nos. | MOC | IS 2062 |
| Gasket for body flange | 3 mm PTFE | | |
| Support Plate | Qty – 2 nos. | MOC | IS 2062 E250 BR |
| Tie rod | Qty – 6 nos | MOC | IS 2062 E250 BR |

| | | | |
|--------------------------|------------------|-------------------|-----------------|
| Saddle Support | Qty – 2 Nos. | MOC | IS 2062 E250 BR |
| Lifting Lug MOC | Qty – 2 Nos. | MOC | IS 2062 E250 BR |
| | Tube Side | Shell Side | |
| Nozzle Pipe MOC | MS | MS | |
| Nozzle Flange MOC | MS | MS | |

NOZZLE DETAILS:

| No. | Nozzle | Service | Size (NB) | Sch/Thk | Qty. | Type |
|-----|---------|--|-----------|-----------|------|-----------|
| 1 | N1 | FEED FROM COLUMN | 300 | 12mm Thk | 1 | SORF #150 |
| 2 | N1A | FEED FROM COLUMN FOR DIP PIPE | 150 | SCH 40 | 1 | SORF #150 |
| 3 | N3 | TEMPERATURE INDICATOR | 100 | SCH 40 | 1 | SORF #150 |
| 4 | N4 | LEVEL INDICATOR (RADAR TYPE) | 150 | SCH 40 | 1 | SORF #150 |
| 5 | N7 | TUBE SIDE CONDENSATE OUTLET | 40 | SCH 40 | 1 | SORF #150 |
| 6 | N8 | TUBE SIDE STEAM INLET | 100 | SCH 40 | 1 | SORF #150 |
| 7 | LG1/2 | LEVEL GAUGE (GLASS TYPE) TUBE | 150 | SCH 80 | 1 | SORF #150 |
| 8 | N12 | PRESSURE INDICATOR/TRANSMITTER | 150 | SCH 80 | 1 | SORF #150 |
| 9 | N13 | LIQUID OUTLET | 150 | SCH 40 | 1 | SORF #150 |
| 10 | N14 A/B | LIQUID DRAIN | 150 | SCH 40 | 1 | SORF #150 |
| 11 | N15 | VAPOR RETURN TO COLUMN | 400 | 12 mm Thk | 1 | SORF #150 |
| 12 | N16 | PRESSURE EQUILISATION LINE/FRESH BENZENE INLET | 100 | SCH 40 | 1 | SORF #150 |
| 13 | N17 | LOW LEVEL SWITCH | 150 | SCH 40 | 1 | SORF #150 |
| 14 | M | MANHOLE + B.F. WITH DAVIT | 550 | 12 mm Thk | 1 | SORF #150 |

3. KETTLE RE-BOILER HE-75

Process Data Sheet

| | Shell Side | Tube Side |
|--|------------------|-----------------|
| Design Pressure (Kg/cm ² g) | Shell Side – 3.5 | Tube Side – 6 |
| Design Temperature (Deg C) | Shell Side – 200 | Tube Side – 200 |

CONSTRUCTION DATA

Gross Heat transfer area – 75 m² , Two pass on Tube Side

Kettle Details -

| | | | |
|--------------|--|------|--------|
| Kettel Shell | 12 mm Thk X 2300mm ID X 3500 mm Long | Qty. | 1 No. |
| MOC | IS 2062 E 250 BR | | |
| Dish End | 2:1 Ellipsoidal | Thk | 12 mm |
| MOC | IS 2062 E 250 BR | Qty. | 2 Nos. |
| Bonnet Shell | 8 mm Thk X 710 mm ID X (350 mm F) Long | Thk. | 8 mm |
| MOC | IS 2062 E 250 BR | Qty. | 1 Nos. |
| Dish End | 2:1 Ellipsoidal | Thk | 8 mm |
| MOC | IS 2062 E 250 BR | Qty. | 1 Nos. |

Tube Sheet Details -

| | | | |
|-----|-----------|------|--------|
| OD | 860 mm OD | Thk | 32 mm |
| MOC | MS | Qty. | 1 Nos. |

Tube Details -

| | | | |
|--------|------------|------|-------------|
| Type | Smooth | MOC | CS |
| Size | 25.4 mm OD | Thk | 2.11 mm thk |
| Length | 3000 mm | QTY. | 316 |

Body flanges -

| | | | |
|------------------------|--------------|------|-----------------|
| OD | 860 mm OD | Thk. | 45 mm |
| Qty. | 2 Nos. | MOC | IS 2062 |
| Gasket for body flange | 3 mm PTFE | | |
| Support Plate | Qty – 2 nos. | MOC | IS 2062 E250 BR |
| Tie rod | Qty – 6 nos | MOC | IS 2062 E250 BR |

| | | | |
|--------------------------|------------------|-------------------|-----------------|
| Saddle Support | Qty – 2 Nos. | MOC | IS 2062 E250 BR |
| Lifting Lug MOC | Qty – 2 Nos. | MOC | IS 2062 E250 BR |
| | Tube Side | Shell Side | |
| Nozzle Pipe MOC | MS | MS | |
| Nozzle Flange MOC | MS | MS | |

NOZZLE DETAILS:

| No. | Nozzle | Service | Size (NB) | Sch/Thk | Qty. | Type |
|-----|---------|--|-----------|-----------|------|-----------|
| 1 | N1 | FEED FROM COLUMN | 300 | 12mm Thk | 1 | SORF #150 |
| 2 | N1A | FEED FROM COLUMN FOR DIP PIPE | 150 | SCH 40 | 1 | SORF #150 |
| 3 | N3 | TEMPERATURE INDICATOR | 100 | SCH 40 | 1 | SORF #150 |
| 4 | N4 | LEVEL INDICATOR (RADAR TYPE) | 150 | SCH 40 | 1 | SORF #150 |
| 5 | N7 | TUBE SIDE CONDENSATE OUTLET | 40 | SCH 40 | 1 | SORF #150 |
| 6 | N8 | TUBE SIDE STEAM INLET | 100 | SCH 40 | 1 | SORF #150 |
| 7 | LG1/2 | LEVEL GAUGE (GLASS TYPE) TUBE | 150 | SCH 80 | 1 | SORF #150 |
| 8 | N12 | PRESSURE INDICATOR/TRANSMITTER | 150 | SCH 80 | 1 | SORF #150 |
| 9 | N13 | LIQUID OUTLET | 150 | SCH 40 | 1 | SORF #150 |
| 10 | N14 A/B | LIQUID DRAIN | 150 | SCH 40 | 1 | SORF #150 |
| 11 | N15 | VAPOR RETURN TO COLUMN | 400 | 12 mm Thk | 1 | SORF #150 |
| 12 | N16 | PRESSURE EQUILISATION LINE/FRESH BENZENE INLET | 100 | SCH 40 | 1 | SORF #150 |
| 13 | N17 | LOW LEVEL SWITCH | 150 | SCH 40 | 1 | SORF #150 |
| 14 | M | MANHOLE + B.F. WITH DAVIT | 550 | 12 mm Thk | 1 | SORF #150 |

Notes:

1. All tag nos GAD to be submitted in one week.
2. Weir plate to be considered after U tube bundle about 60% of shell diameter.
3. Tubes Make Remi, Scoda, Amba, and Ratnadeep.
4. Drawing enclosed with SO is for reference only.

| | |
|----------------------------|--|
| Delivery Date (Ex-works) | HE – 30 & HE – 35 by 14th October 2022 (Ex-works) HE – 75 by 29th October 2022 (Ex-works) |
| Internal Inspection Report | Required |
| TPI | YES (By client) |
| Remark/Instruction | Test Certificates Required as per CDPS STD QAP |

| Issued By | Signature | Received By | Signature | | Signature |
|-----------|-----------|---------------|-----------|-------------|-----------|
| Marketing | | Design/Dwg | | Prepared By | NB |
| | | Manufacturing | | Checked By | NB |
| | | Purchase | | Approved By | TW |