



PHARMA DEVILS

ENGINEERING DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Engineering

SOP No.:

Title: Specification of Utility Lines

Effective Date:

Supersedes: Nil

Review Date:

Issue Date:

Page No.:

1.0 Revision History

Rev. No.	Details of changes	Reason for change
00	NIL	NEW SOP

2.0 OBJECTIVE:

2.1 The Objective of this SOP is to provide specifications of utility lines being supplied in various departments.

3.0 SCOPE:

3.1 This SOP is applicable for the provide the Specifications of utility lines being supplied in various departments.

4.0 RESPONSIBILITY:

4.1 The Maintenance Engineer shall be:

4.1.1 Responsible for monitoring of various utilities being supplied to various departments.

4.1.2 Responsible for ensuring the specification at the time of releasing new order.

4.1.3 Responsible to ensure the compliance of specification at the time of the receipt and installation.

5.0 ACCOUNTABILITY:

Head –Engineering Services

6.0 PROCEDURE:

6.1 Compressed Air Line:

6.1.1 WORKING PRESSURE : 6.0 – 8.0 kg/cm²

6.1.2 MATERIAL OF CONSTRUCTION : Galvanized Iron (GI)

6.1.3 TYPE OF CONDUCTING LINE : Elongated Run Weld (ERW) type.

6.1.4 CLASS OF LINE : “ C ”

6.1.5 MAKE : M/S TATA, M/S ZENITH & M/S JINDAL.



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- 6.1.6 TYPE OF JOINTS : Threaded Joints Connected With Union Joints, Couplings, Elbows And Reducers.
- 6.1.7 PRESSURE CONTROL : Regulator cum Filter of 40 μ
- 6.1.8 FILTRATION : Instrument Air: 40 μ Filter With Lubricator.
Process Air: Series of 40 μ filters, .5 μ Filter and 0.01 μ filter at user point.

6.2 NITROGEN LINE:

- 6.2.1 WORKING PRESSURE : 3.0 – 5.0 kg/cm²
- 6.2.2 MATERIAL OF CONSTRUCTION : Galvanized Iron
- 6.2.3 TYPE OF CONDUCTING LINE : Elongated Run Weld (ERW) type.
- 6.2.4 CLASS OF LINE : “ C ”
- 6.2.5 MAKE : M/S TATA, M/S ZENITH & M/S JINDAL.
- 6.2.6 TYPE OF JOINTS : Threaded Joints Connected With Union Joints, Couplings, Elbows And Reducers.
- 6.2.7 PRESSURE CONTROL : Regulator cum Filter of 40 μ
- 6.2.8 FILTRATION : Process Air: Series of 40 μ filter, 0.5 μ Filter and 0.01 μ filters at user point.

6.3 POTABLE WATER:

- 6.3.1 WORKING PRESSURE : 2.0 – 3.0 kg/cm²
- 6.3.2 MATERIAL OF CONSTRUCTION : Galvanized Iron (GI)
- 6.3.3 TYPE OF CONDUCTING LINE : Elongated Run Weld (ERW) type.
- 6.3.4 CLASS OF LINE : “ C ”
- 6.3.5 MAKE : M/S TATA, M/S ZENITH & M/S JINDAL.
- 6.3.5 TYPE OF JOINTS : Threaded Joints Connected With Union Joints, Couplings, Elbows and Reducers.

6.4 REVERSE OSMOSIS (RO) WATER:

- 6.4.1 WORKING PRESSURE : 2.0 – 3.0 kg/cm²
- 6.4.2 MATERIAL OF CONSTRUCTION : Stainless Steel (SS) 304
- 6.4.3 TYPE OF CONDUCTING LINE : Elongated Run Weld (ERW) type.



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6.4.4 TYPE OF JOINTS : Argon Gas Welded Joints Connected with Slip-on flanges, Elbows and Reducers.

6.5 COOLING WATER:

- 6.5.1 WORKING PRESSURE** : 2.0 – 3.0 kg/cm²
- 6.5.2 MATERIAL OF CONSTRUCTION** : MILD STEEL (MS)
- 6.5.3 TYPE OF CONDUCTING LINE** : Elongated Run Weld (ERW) type.
- 6.5.4 CLASS OF LINE** : “ C ”
- 6.5.5 MAKE** : M/S TATA, M/S ZENITH & M/S JINDAL
- 6.5.6 TYPE OF JOINTS** : Arc Welded Joints Connected with Slip-on flanges, Elbows and Reducers.

6.6 CHILLED WATER:

- 6.6.1 WORKING PRESSURE** : 2.0 – 3.0 kg/cm²
- 6.6.2 MATERIAL OF CONSTRUCTION** : MILD STEEL (MS)
- 6.6.3 TYPE OF CONDUCTING LINE** : Elongated Run Weld (ERW) type.
- 6.6.4 CLASS OF LINE** : “ C ”
- 6.6.5 MAKE** : M/S TATA, M/S ZENITH & M/S JINDAL
- 6.6.6 TYPE OF JOINTS** : Arc Welded Joints Connected With Slip-on flanges, Elbows And Reducers.

6.7 PURIFIED WATER LINE:

- 6.7.1 WORKING PRESSURE** : 2.0 – 4.0 kg/cm²
- 6.7.2 MATERIAL OF CONSTRUCTION** : STAINLESS STEEL (SS) - 316L
- 6.7.3 TYPE OF CONDUCTING LINE** : INSIDE ELECTRO POLISHED
- 6.7.4 AVERAGE ROUGHNESS VALUE** : Ra < 0.4μ
- 6.7.5 TYPE OF JOINTS** : Tri-clover with EPDM gasket
- 6.7.6 TYPE OF WELDING** : Orbital welding

6.8 WFI LINE:

- 6.8.1 WORKING PRESSURE** : 2.0 – 4.0 kg/cm²
- 6.8.2 MATERIAL OF CONSTRUCTION** : STAINLESS STEEL (SS) - 316L



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6.8.3 TYPE OF CONDUCTING LINE : INSIDE ELECTRO POLISHED

6.8.4 AVERAGE ROUGHNESS VALUE : Ra < 0.4 μ

6.8.5 TYPE OF JOINTS : Tri-clover with EPDM gasket

6.8.5 TYPE OF WELDING : Orbital welding

7.0 ANNEXURES:

NIL

8.0 References (S)

NIL

9.0 Glossary

SOP : Standard Operating procedure

No : Number

GI : Galvanized Iron

ERW : Elongated Run Weld