

## **SPECIFICATIONS / TERMS & CONDITIONS OF SUPPLY**

The stainless steel 3 piece ball valves of following specifications and sizes are required that conform to the chemical composition as below:

### **i. Miscellaneous Details:**

<b>Sr. #</b>	<b>Description</b>	<b>Specifications</b>	<b>Reference std.</b>
1	Type	3 Piece, Full port	----
2	Ends	Butt welding ends	Sch 40
3	Operating Temperature	150 C	----
4	Operating Pressure	10 bar	----
5	Rating	600 lb.	ASME B16.34-2004 Table 2-2.3
6	Material:	----	----
6.1	Body, Ball, Bonnet, Stem, Nuts, Bolts, Washer & Handle	F316L	ASTM A 182/A 182M - 04
6.2	Seat And Stem Packing	15% R-PTFE	----
7	Valve Dimensions	----	ASME B16.34-2004 Section 6
8	End to End Dimensions	----	ASME B16.10-1992 Table 1

### **ii. Bill Of Quantities:**

<b>Sr. #</b>	<b>Sizes</b>	<b>Unit</b>	<b>Quantity</b>
1	DN 8	No.	250
2	DN 10	-	180
3	DN 15	-	270
4	DN 20	-	120
5	DN 25	-	140
6	DN 40	-	120
7	DN 50	-	140

**iii. Chemical Composition\_F-316L:**

Sr. #	Element	Composition %
1	Carbon	0.03
2	Manganese	2.00
3	Phosphorus	0.045
4	Sulfur	0.03
5	Silicon	1.00
6	Nickle	10.0-15.0
7	Chromium	16.0-18.0
8	Molybdenum	2.0-3.0

**iv. Required Material Tests:**

Sr. #	Description	Reference std.
1	Corrosion Testing	Practice C: ASTM Standard A 262-02a
2	Pressure Testing	Section 7: ASME B16.34-2004.

**v. Product Marking:**

Each valve shall be marked with the section 20 of ASTM standard A 961 - 04 as:

- ASTM Specification no. , Grade and rating, identification no. , rating, and heat no.
- Name/mark of manufacturer

**vi. Finish and Appearance:**

The finished parts shall conform to the dimensions and finish as specified on the order. Regarding Surface finishing, product shall conform to the requirements of ASTM standard A 961 - 04.

**vii. Mill Test Certificate:**

Product certification must be complied with section 19 of ASTM standard A 961 - 04 and section 16 of ASTM Standard A 182/A 182M - 04. All Test reports, as mentioned against each, shall be furnished to the purchaser.

**\*\* Prices should be quoted on C&F Karachi basis with freight charges mentioned clearly.**