

STAINLESS STEEL 316L PLATES B.O.Q / TERMS & CONDITIONS

MATERIAL STANDARDS

ASTM A240 Type 316L
UNS Designation S 31603

GENERAL REQUIREMENTS

- i) The Stainless Steel 316L Plates shall be provided in Hot Rolled, Annealed and Pickled condition.
- ii) The Stainless Steel 316L Plates shall conform to the general requirements of ASTM A480/A480M-12.

BILL OF QUANTITIES

Sr. #	Size of Plates			Quantity	
	Thickness (mm)	Width (mm)	Length (mm)	No. of Plates	Approximate Weight (Kg)
1.1	6	3000	6000	04	3456
1.2	8	3000	3000	04	2304
1.3	10	3000	3000	01	720
1.4	12	3000	6000	02	3456
1.5	14	3000	4000	01	1344
1.6	20	1000	1000	01	160
1.7	25	1000	1500	01	300

TERMS & CONDITIONS OF SUPPLY

The Stainless Steel 316L plates shall conform to the requirements of chemical composition & mechanical properties as follow:

CHEMICAL COMPOSITION

The steel shall conform to the requirements as to chemical composition prescribed in Table 1 of ASTM A 240/A 240M-12.

MECHANICAL PROPERTIES:

The material shall conform to the mechanical properties specified in Table 2 of ASTM A240/240M-12.

TOLERANCES

The permissible variations in mass, thickness, width, length, flatness and other properties must be according to section 9 of ASTM A 480/A 480M-12a.

MILL TEST CERTIFICATE

Mill Test Certificate provided shall be in accordance with EN 10204:2004 Type 3.1

INTER-GRANULAR CORROSION TEST

The material shall pass Inter-granular Corrosion Tests conducted for each batch in accordance with Practice A and E of ASTM A 262-02a and provide along with Mill Test Certificate.

WORKMANSHIP, FINISH AND APPEARANCE

The finished plates shall be of uniform quality and shall have workmanlike finish in conformance to section 10 and 13 of ASTM A 480/A 480M-12.

INSPECTION

- i) Inspection of material according to section 22 of ASTM A480/480M-12 by the purchaser's representative at the production site shall be foreseen as part of the purchase order.
- iii) The manufacturer shall afford the purchaser's inspector all reasonable facilities necessary to satisfy the inspector that the material being furnished is in accordance with the specifications.

PACKAGING, MARKING AND LOADING:

The packaging, marking and loading for shipment shall be in accordance with section 25 of ASTM A480/480M-12.

STAINLESS STEEL 316L SEAMLESS DRAWN PIPES B.O.Q / TERMS & CONDITIONS**MATERIAL STANDARDS**

ASTM A 312 TP316L
 UNS Designation S 31603

GENERAL REQUIREMENTS

- i) The Stainless Steel 316L Pipes shall be provided in Seamless Drawn, Annealed and Pickled condition.
- ii) The Stainless Steel 316L Pipes shall conform to the general requirements of ASTM A312/A312M – 12a.

BILL OF QUANTITIES

Sr #	Size of Pipe	Quantity				
		Outside Diameter (mm)	Wall Thickness (mm)	No. of Lengths (6m/length)	Total length (m)	Weight kg
1.1	DN 8 Sch. 80s	13.72	3.02	10	60	49
1.2	DN 15 Sch. 80s	21.34	3.73	12	72	119
1.3	DN 20 Sch. 80s	26.67	3.91	10	60	134
1.4	DN 25 Sch. 40s	33.40	3.38	12	72	184
1.5	DN 25 Sch. 80s	33.40	4.55	10	60	198
1.6	DN 40 Sch. 40s	48.26	3.68	03	18	74
1.7	DN 50 Sch. 80s	60.33	5.54	03	18	137
1.8	DN 80 Sch. 10s	88.90	3.05	03	18	118
1.9	DN 100 Sch. 80s	114.30	3.05	05	60 30	682
1.10	DN 150 Sch. 40s	168.28	7.11	03	18	518
1.11	DN 200 Sch. 40s	219.08	8.18	05	60 30	1300
1.12	DN 300 Sch. 40s	323.85	9.53	03	18	1099

TERMS & CONDITIONS OF SUPPLY

The Stainless Steel 316L pipes shall conform to the requirements of chemical composition & mechanical properties as follow:

DIMENSIONAL REQUIREMENTS

The Stainless Steel 316L Pipe shall conform to dimensional requirements of ASME B 36.19.

CHEMICAL COMPOSITION

The steel shall conform to the requirements as to chemical composition prescribed in Table 1 of ASTM A312/A312M-12a.

MECHANICAL PROPERTIES:

- i) The tensile properties of the material shall conform to the requirements prescribed in Table 4, ASTM A312/A312M-12.
- ii) Mechanical Tests required shall be performed in accordance with Test Methods and Definitions ASTM A 370.

TOLERANCES

The permissible variations in mass, wall thickness, inside diameter, outside diameter and length of pipes must be according to section 9, 10, 11, 12 & 13 respectively of ASTM A999/A 999M-12.

MILL TEST CERTIFICATE

Mill Test Certificate provided shall be in accordance with EN 10204:2004 Type 3.1

INTERGRANULAR CORROSION TEST

The material shall pass Intergranular Corrosion Tests conducted for each batch in accordance with Practice A and E of ASTM A262-02a and provide along with Mill Test Certificate.

EDDY-CURRENT TEST

The supplied pipes shall pass Eddy-current tests conducted by the manufacturer in accordance with practices ASTM E 426-12.

WORKMANSHIP, FINISH AND APPEARANCE

The finished pipes shall be reasonably straight and shall have a workmanlike finish in conformance to section 14, ASTM A312/A312M-12a.

INSPECTION

- iii) Inspection of material shall be in accordance with section 23 of ASTM A999/999M-12 by the purchaser's representative at the production site shall be foreseen as part of the purchase order.
- iv) The manufacture shall afford the purchaser's inspector all reasonable facilities necessary to satisfy the inspector that the material being furnished is in accordance with the specifications.

PACKAGING, MARKING AND LOADING:

The packaging, marking and loading for shipment shall be in accordance with section 27 of ASTM A999/999M-12.

STAINLESS STEEL 316L ROUND BARS B.O.Q / TERMS & CONDITIONS**MATERIAL STANDARDS**

ASTM	A479 Type 316L
UNS Designation	S 31603

GENERAL REQUIREMENTS

- iii) The Stainless Steel 316L Round Bars shall be provided in Hot Rolled, Annealed and Pickled condition.
- iv) The Stainless Steel 316L Round Bars shall conform to the general requirements of ASTM A 484/A 484M – 12.

BILL OF QUANTITIES

Sr. #	Description	Size / Dimension		Quantity	
		Diameter (mm)	Length (mm)	Nos.	Approximate mass (Kg)
1.1	Rod ø 40	40	3000	01	30.14
1.2	Rod ø 45	45	6000	01	76.30
1.3	Rod ø 50	50	3000	01	47.10
1.4	Rod ø 60	60	5000	01	113.04
1.5	Rod ø 75	75	3000	01	105.98
1.6	Rod ø 100	100	1500	01	94.20
1.7	Rod ø 140	140	1800	01	184.63

TERMS & CONDITIONS OF SUPPLY

The Stainless Steel 316L Round Bars shall conform to the requirements of chemical composition & mechanical properties as follow:

CHEMICAL COMPOSITION

The steel shall conform to the requirements as to chemical composition according to section 5 of ASTM A 479/A 479M-12.

MECHANICAL PROPERTIES:

The material shall conform to the mechanical properties specified in section 7 of ASTM A 479/A 479M-12.

TOLERANCES

The permissible variations in mass and dimension must be according to section 9 of ASTM A 484/A 484M-12a.

MILL TEST CERTIFICATE

Mill Test Certificate provided shall be in accordance with EN 10204:2004 Type 3.1

INTERGRANULAR CORROSION TEST

The material shall pass Intergranular Corrosion Tests conducted for each batch in accordance with Practice E of ASTM A 262-02a and provide along with Mill Test Certificate.

WORKMANSHIP, FINISH AND APPEARANCE

The finished Round Bars shall be of uniform quality and shall have workmanlike finish in conformance to section 8 and 10 of ASTM A 484/A 484M-12.

INSPECTION

- v) Inspection of material shall be in accordance with section 15 of ASTM A 484/484M-12 by the purchaser's representative at the production site shall be foreseen as part of the purchase order.
- vi) The manufacture shall afford the purchaser's inspector all reasonable facilities necessary to satisfy the inspector that the material being furnished is in accordance with the specifications.

PACKAGING, MARKING AND LOADING:

The packaging, marking and loading for shipment shall be in accordance with section 19 of ASTM A 484/484M-12.

STAINLESS STEEL 316L SEAMLESS PIPE FITTINGS B.O.Q / TERMS & CONDITIONS**MATERIAL STANDARDS**

ASTM	A403 WP 316L
UNS Designation	S 31603

GENERAL REQUIREMENTS

- i) The Stainless Steel 316L Seamless Pipe Fittings shall be provided in Annealed and Pickled condition.
- ii) The Stainless Steel 316L Seamless Pipe Fittings shall conform to the general requirements of ASTM A960/A 960M-12.

BILL OF QUANTITIES

Sr. #	Description	Size / Dimension	Quantity (No.)
1.1	Pipe Cap	DN 15 Sch 80s	10
1.2	Pipe Cap	DN 150 Sch 40s	10
1.3	Standard Pipe Cap	DN 200 Sch 40s	6
1.4	Standard Pipe Cap	DN 300 Sch 40s	10
1.5	Equivalent (Straight) Tee	DN 200 Sch 40s	6
1.6	Concentric Reducer	DN 25× 40 Sch 80s	8

TERMS & CONDITIONS OF SUPPLY

The Stainless Steel 316L Seamless Pipe Fittings shall conform to the requirements of chemical composition & mechanical properties as follow:

DIMENSIONAL REQUIREMENTS

The Stainless Steel 316L Seamless Pipe Fittings shall conform to dimensional requirements of ASME B 16.9.

CHEMICAL COMPOSITION

The steel shall conform to the requirements as to chemical composition prescribed in section 7 of ASTM A403/A403M-12.

MECHANICAL PROPERTIES:

- iii) The tensile properties of the material shall conform to the requirements prescribed in section 8, ASTM A403/A403M-12.
- iv) Mechanical Tests required shall be performed in accordance with Test Methods and Definitions ASTM A 370.

TOLERANCES

The permissible variations in mass, wall thickness, inside diameter, outside diameter and length of Seamless Pipe Fittings must be according to section 11 of ASME B 16.9.

MILL TEST CERTIFICATE

Mill Test Certificate provided shall be in accordance with EN 10204:2004 Type 3.1

INTERGRANULAR CORROSION TEST

The material shall pass Intergranular Corrosion Tests conducted for each batch in accordance with Practice A and E of ASTM A262-02a and provide along with Mill Test Certificate.

FINISH AND APPEARANCE

The finished Seamless Pipe Fittings shall conform to the requirements in section 15 of ASTM A 960/960M-12.

PRODUCT MARKING

The finished Seamless Pipe Fittings shall be marked in conformance to section 14 of ASTM A403/403M-12 and section 19 of ASTM A960/960M-12.

INSPECTION

- vii) Inspection of material shall be in accordance with section 17 of ASTM A960/960M-12 by the purchaser's representative at the production site shall be foreseen as part of the purchase order.
- viii) The manufacture shall afford the purchaser's inspector all reasonable facilities necessary to satisfy the inspector that the material being furnished is in accordance with the specifications.

PACKAGING, MARKING AND LOADING:

The packaging, marking and loading for shipment shall be in accordance with section 21 of ASTM A960/960M-12.