Annexure-A

Flanges

Sr.#	Description	Material	Qty. (Nos.)	Wt.(Kg.) (Approx.)	CO
1	Flange WNRF DN 250, 600 lbs, Sch.80s	SA-182F 304 As per attached specification No. DNF009-HE001-MS-04/ 288 (Rev.0)(Annexure-C)	1	89	DNF00
2	Blind Flange DN 250, 600 lbs.		1	105	
3	Blind Flange DN 50, 600 lbs.		1	5	DNF01
4	Flange WNRF DN 50, 600 lbs, Sch.80s		1	4	
5	Flange WNRF DN 25, 600 lbs, Sch.80s		2	4	
6	Flange WNRF DN 25, 600 lbs, Sch.40s		2	4	DNF0(
7	Flange WNRF DN 15, 600 lbs, Sch.40s		2	2	
8	Flange WNRF DN 15, 600 lbs, Sch.80s		4	3	DNF0

Total weight (Kg)= 216

Note:

Please submit check list (**Annexure-B**) along with your quotation, after encircling either "Yes" or "No"

Annexure-B

Technical Check List

1- All the technical details i-e chemical composition, mechanical properties and testing requirements given in applicable specification have been carefully read and understood.	Yes	No
2- Mill Test Reports having Chemical & Mechanical properties , will be supplied with items as per attached specification.	Yes	No
3- All the contents of MTCs i-e chemical composition, mechanical properties and testing requirements will be carefully checked and corrected, for complete compliance to applicable specification.	Yes	No
4- All the items to be supplied, will be qualified in Inter Granular Corrosion Testing (IGC) in accordance with ASTM specification A-262 Practice E.	Yes	No
5- Manufacturer's name/logo, Heat Number, Material Grade and Size as per identification/marking requirements of applicable specification will be present on the items.	Yes	No
6- The items & their material grade will be examined at our works if required.	Yes	No

Note:

This check list must be submitted along with your quotation, after encircling either "Yes" or "No".

Stamp/ Signature of Supplier

Annexure- C

Material Specification

No. DNF009-HE001-MS-04/ 288
Date: 26-08-2019 Rev. No. 0
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Product : Austenitic Stainless Steel Pipe Flanges
Material : SA- 182/184M, F 304
Condition : Solution annealed, Quenched and Forged
Technical Requirement : The material furnished under SA-182/SA-182M, F304 shall meet the requirements of ASME B & PV Code Section II Part A, SA-484/SA-484M and SA-961/SA-961M (Edition 2017).
Chemical Composition : % As per Table below;

	Chemical Composition (%)							
Grade	C	Mn	P	S	Si	Cr	Ni	N
304	≤ 0.08	≤ 2.0	≤ 0.045	≤ 0.030	≤ 1.0	18-20	8-11	≤ 0.1

Mechanical Properties : As per Table below;

Grade	Tensile Strength MPa (min)	Yield Strength MPa (min)	Elongation in 50mm, min, %	Reduction of Area min, %
304	515	205	30	50

Mill Test Reports

i. Mechanical test report.
ii. Chemical test report.
iii. Inter Granular Corrosion Test (IGC) report in accordance with ASTM specification A-262 Practice E.

Dimension:

Flange sizes ,tolerance & face finish shall be in accordance with ASME B16.5-2013,as per given nominal size & class, unless otherwise specified

Manufacturing:

- The stainless steel shall be melted by basic electric-furnace process or other better process.
- Sufficient discard shall be made to secure freedom from injurious piping and undue segregation.
- Forging shall be soloution annealed at a minimum temperature of 1040^{0}C, and then quenched in water below 260^{0}C.

Quality

The forgings shall have workman-like finish and should be free of injurious defects.

Product Marking

The manufacturer's name or brand, specification number and grade, heat number shall be marked on each forging.

Note: All certificates & reports shall be in English language.