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Dragon Aromatics ˆ Zhangzhou˜ Co.,Ltd.ˆ DAC˜

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DAC PX Complex Project

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˥ ˚ à ˝Ω ⁘

SPECIFICATION OF HIGH PRESSURE FITTINGS

2	2011.1.26						
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g REV.	DATE	DESCRIPTION	8 PREPATED BY	CHECKED BY	APPROVED BY		ñ ISSUED FOR APPROVAL

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1 ‡ GENERAL

1.1 تن SCOPE

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This specification is the basic technical requirement for Fittings and Flanges. Manufacturer shall comply with relative standards except this.

1.2 Ռ ñ STANDARDS AND CODES

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The latest edition of the following standards and codes shall be applied unless otherwise noted.

ASME B31.3 Process piping

ASME B36.10M Welded and seamless wrought steel pipes

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ASME B36.19M Stainless steel pipe

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API 590 American Petroleum Institute Steel Line Blanks

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MSS SP-95 Swage(d) Nipples and Bull Plugs

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MSS SP-97 Integrally Reinforced Forged Branch Outlet Fittings - Socket Welding,Threaded and Buttwelding Ends

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ASTM A106 Seamless Carbon Steel Pipe for High-Temperature Service

(P)

ASTM A335 Seamless ferritic alloy-steel pipe for high-temperature service

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ASTM A312 Seamless and welded austenitic stainless steel pipes

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ASTM A388 Ultrasonic Examination of Heavy Steel Forgings

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ASTM A530 General requirements for specialized carbon and alloy-steel pipe

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ASTM A691 Carbon and Alloy Steel Pipe, Electric-Fusion-Welded for High-Pressure Service at High Temperature

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ASTM A358 Electric-Fusion-Welded Austenitic Chromium-Nickel Alloy Steel Pipe for Higγ

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ASTM A105 Carbon Steel Forgγ gs for Piping Applications

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ged Fittings, and Valves and Parts for High-Temperature Service

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ASTM A234 Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and Higγ Temperature Service

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ASTM A403 Wrought Austenitic Stainless Steel Piping Fittings

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ASTM A815 Wrought Ferritic, Ferritic/Austenitic, and Martensitic

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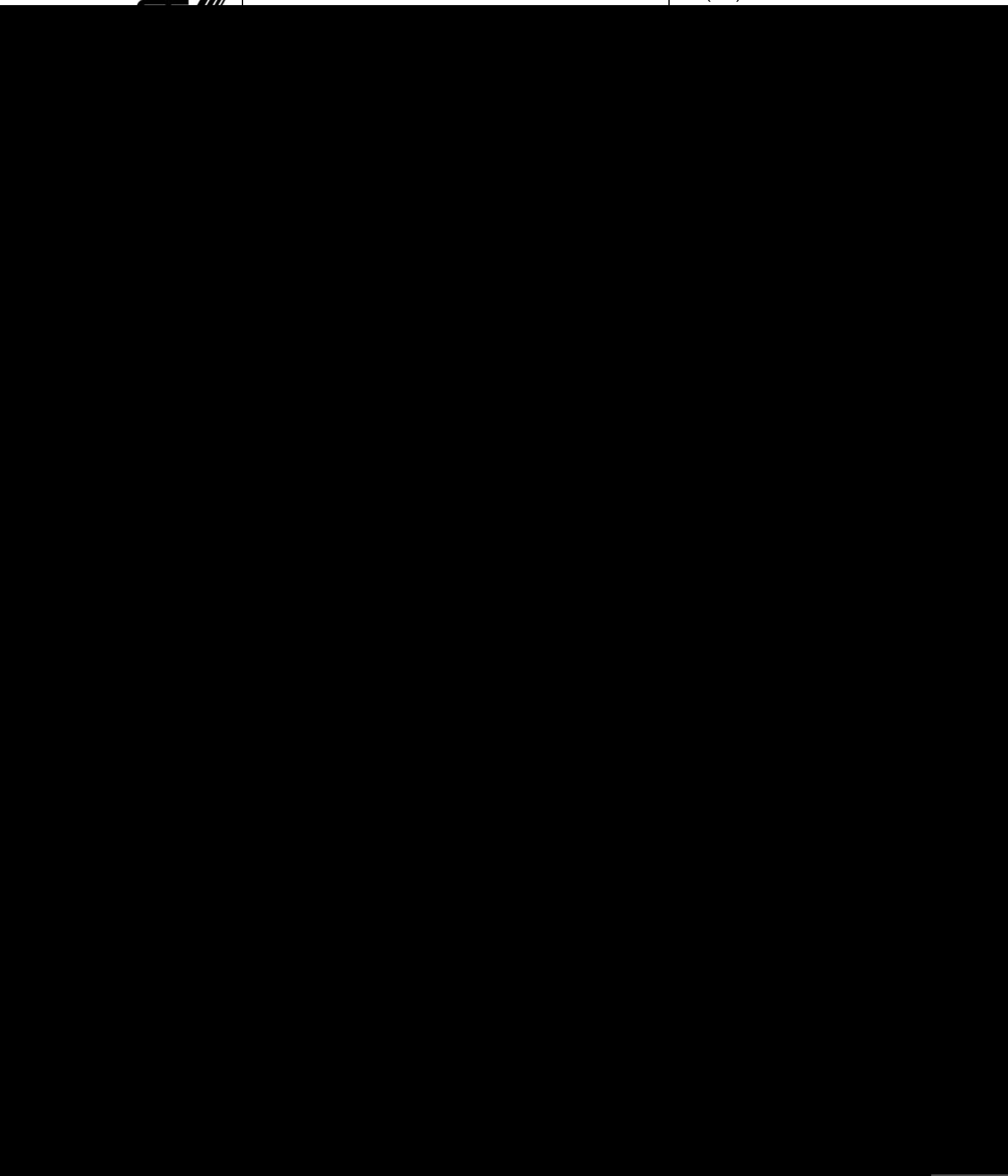

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Chrome-Molybdenum pipes, Solution is required for stainless steel.

2.8 2205 ㄣ a ˘ ὲ PREN a æ ɣ 34ˆ PREN= % Cr +3.3%Mo+16%N˜ Â

For duplex stainless steel 2205,PREN should not less than 34 ˆ PREN= % Cr +3.3%Mo+16%N˜ .

3 8 MANUFACTURE

3.1 ˚ G Â

All carbon parts shall be killed carbon steel.

3.2 ˚ g a Â

The surface imperfection shall be removed with grinding and no any repair welding.

3.3 ˚ Ɲ k Â ᴇ a ȁ ʏ ˘ ɣ ╗ ˚ ㄣ Ɲ a ㄣ ɔ ʏ Â

Fittings shall be delivered after the heat treatment.Pickling and passivation are required for Austenitic Stainless Steel, but machined parts can be delivered without pickling.

3.5 4 ˘ R ' XXS(min)˘ (min) ㄣ ï Ḷ ѝ 0˙ +25%˜ У ˚ ㄣ ï Ḷ ѝ -12.5%˙ +2.5% Â

Unless otherwise noted, for example: 0˙ +25%, the wall thickness tolerance for all other pipe shall be -12.5%˙ +12.5% Â

3.5 ˚ ѝ ɸ ㄣ ˘ У ㄧ ASME B16.9 ' ˚ ╗ ASME B16.11 Â

End of butt-weld fittings shall be finished in accordance with ANSI B16.9. The socket weld ends as per ANSI B16.11.

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Normalizing and tempering or full annealing are required for all Chrome-Molybdenum fittings.

4.3 321 à 347 à 347H a ╗ ㄧ ش ∩ ע ˘ ע 900Ņ ¤ 10Ņ˘ 25mm ˥ ɖ 2 ˆ 4.7min/mm˜ ˘ ã’ 304L,316 a ╗ ㄧ ش Â

Solution and stabilizing heat treatment are required after processing for 321s.s, 347s.s, 347Hs.s Fittings. Stabilizing heat treatment shall be at a temperature 900 ¤ 10Ņ, heat preservation of 2 hours per 25mm wall thickness ˆ 4.7min/mm˜ , and air cooling. Solution heat treatment is required for 304L,316 S.S.

4.4 ㄚ ASTM A790 ش Â

Solution heat treatment is required for Duplex S.S. per ASTM A790.

4.5 ṗ ˚ à ˝Ω ç ⅃ ˆ Â

Heat treatment shall be recorded and its report is required

5 ∩ INSPECTION AND TESTING

5.1 ˚ à ˝Ω ˚ , a à | ˘ ˝I ˘ ע Â

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5.5 a ˚ (˝Ω) E165 100% E ˘ Ɲ ˚ (˝Ω) ASTM

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6.1.2 ɣ ᑎ a ǖ ˙ ị , ầ ầ ầ ầ ע جم

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Painting material used for the color coding and stencil marking on components shall not contain an harmful metal, or metal salts, such as tin, zinc, lead, sulfur, copper or chlorides, which cause corrosive attack on heating and shall be resistant to salt water atmosphere, tropical or similar attack.

6.1.3 ɢ æ ᒥ . , ɜ 0.25mm ` لم Â

Marking by stamp shall be applied with low-stress hard-die stamping and a low-stress stamp shall be round nosed with a radius of 0.25mm minimum.

6.1.4 ɜ a مد Â

Marking shall be clearly indicated and shall not be easily erasable.

6.1.5 ᑎ a ɣ ˚ ɑ̈ ầ ầ ᑎ ﻫ ㄟ ᒍ ㄧ Æ Â

6.2 MARKING

6.2.1 У , ↑ Ю " ㄔ , ɜ ⁞ ㄧ Â

Marking shall be carried out, in general, with regard to the following items using easily identifiable symbols.

˙Ω	Nominal Size
ㄟˆ ㄧ˜	Wall Thickness (Schedule Number)
ñ ᑎ ⁞	Material Specification and Grade
˘ ʃ	Manufacturer's Name or Trade Mark
ㄧ ㄧ	Charge/Heat No.
´ Э	Commodity Code as stated on Purchase Order

6.2.2 ᒍ ˚ , a p a Â

Small bore items which would be difficult to mark shall have stainless steel labels attached by stainless steel wire.

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	bolted cover	
	bevel large end	
	butt welding	
CALC	calculation	
	comm	
CON	concentric	
DSAW	double submerged arc weld	
GALV	galvanized	
ID		
OR	outer ring	

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SINOPEC ENGINEERING INCORPORATION