

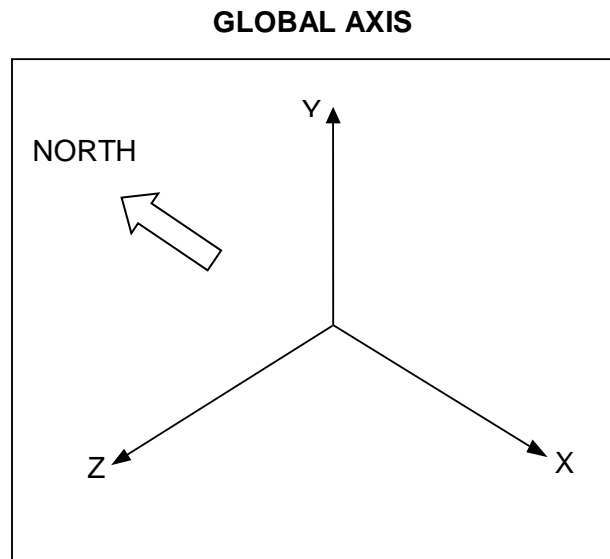
INTRODUCTION

The purpose of the calculation note is to check the compliance of feed water pump piping system with the code ASME B31.1 for stresses due to sustained loads, operational loads and pump nozzle loads.

Sl. No	Size NB (Inch)	Service	Piping Code	Material	Line No.
1	8" x 10"	water	B31.1	ASTM A 106 GR B	Suction Line

The calculations have been carried out using CAESAR II software, Version 4.5 developed by COADE.

Axis Direction: Y axis vertical as below :



REFERENCE DOCUMENTS

1		Sulzer user's manual admissible flange force
2	ASME B16.5	Pipe Flanges and Flanged Fittings
3	API 610	Centrifugal Pumps
4		Piping Isometric Drawing

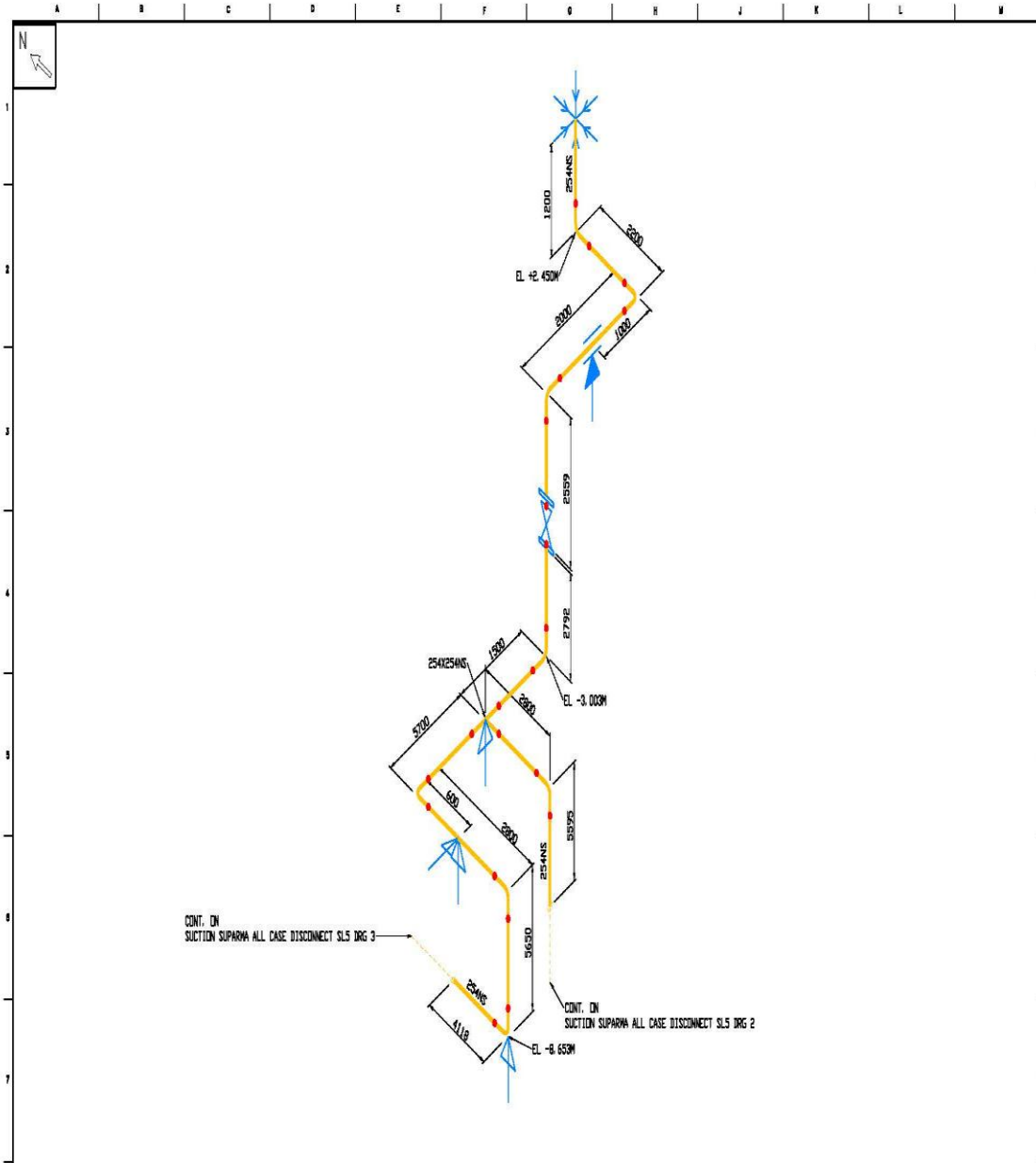
PIPING CHARACTERISTICS

1. Functional properties of lines:

Line No.	Piping Code	Pressure (barg)			Temperature (deg.C)				Density (Kg/m3)		Insulation
		Des.	Ope.	Test	Des.		Ope.		Process Fluid	Test fluid	
					Min	Max	Min	Max			
10 " Suction	B31.1		7.85				30	170	818		20 mm
10 " Suction	B31.1		7.85				30	170	818		20 mm


2. Mechanical properties of lines:

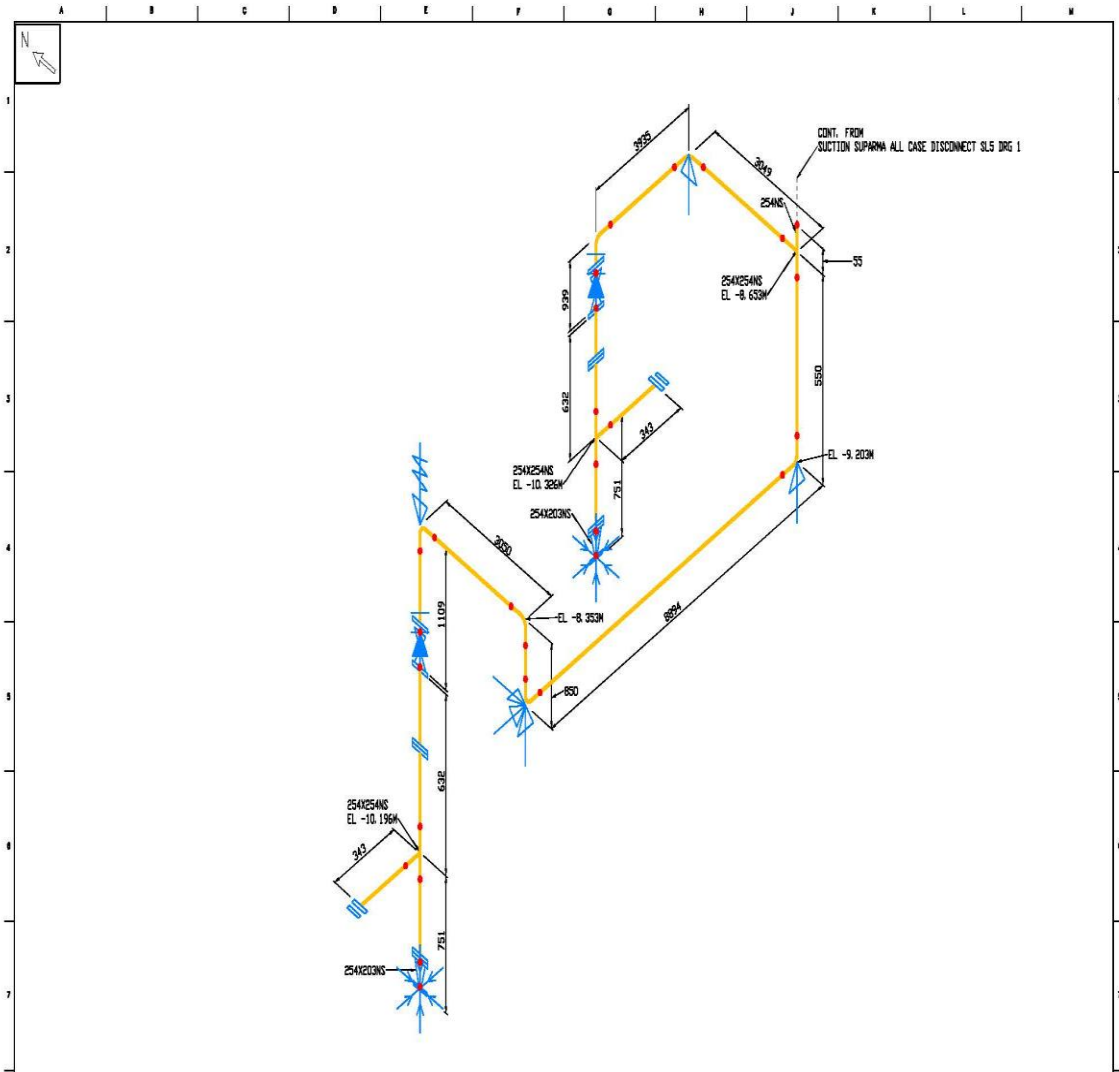
Line No.	Piping Class	Material specification	Nominal Size (inch)	Wall Thickness (mm.)	Corrosion (mm)	Flange Rating
Suction	B31.1	ASTM A 106 GR B	10"	15.1		150
Suction	B31.1	ASTM A 106 GR B	10"	15.1		150




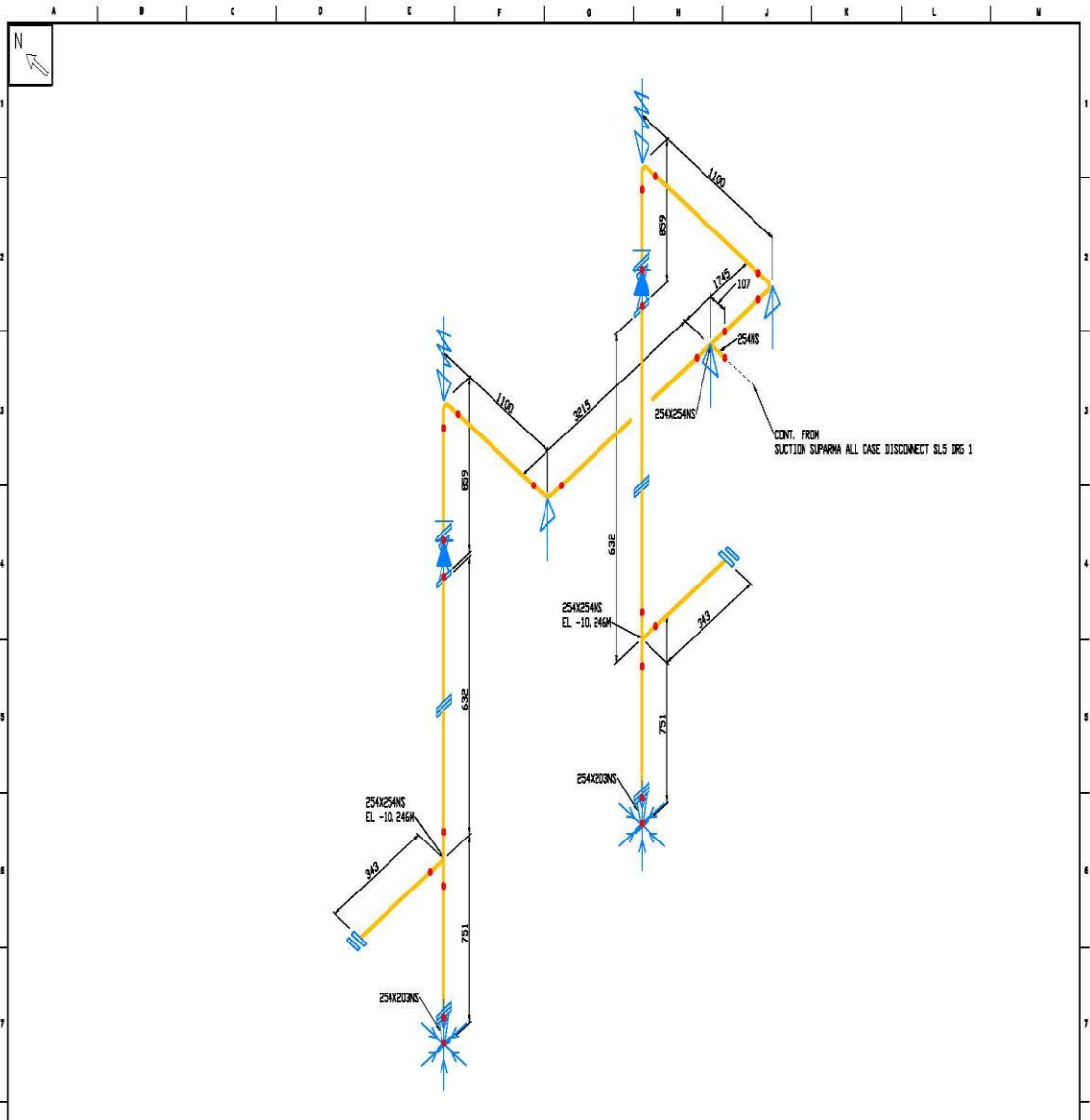
CONT. ON
SUCTION SUPRWA ALL CASE DISCONNECT SLS DRG 3


CONT. ON
SUCTION SUPRWA ALL CASE DISCONNECT SLS DRG 2

	Created by CAESAR II, © 1984-2005 by COADE, Inc., Houston, Texas, USA Telephone: +1 (281) 880-4666 Website: www.coade.com Support: techsupport@coade.com	PIPING SPEC.	OP. TEMP.	REV.
		INSULATION SPEC.	PROJECT NO. IN-PSA-01	
		INSULATION THKS.	SYSTEM	DRG.
		PAINTING SPEC.	AREA IN-PSA-01	FEED WATER PIPING PIPELINE REFERENCE SUPRWA
		MATERIAL	DRAWN BY RINDRA	
REV.	CHANGE	DATE	E.L.DIAGRAM	



	Created by CAESAR II, © 1984-2006 by COADE, Inc., Houston, Texas, USA Telephone: +1 (281) 850-4586 Website: www.coade.com Support: techsupport@coade.com	PIPING SPEC.	OP. TEMP.	FEED WATER PIPING PIPELINE REFERENCE SUPARMA	REV.
		INSULATION SPEC.	PROJECT NO. IH-PSA-01		DRG.
		INSULATION THICK.	SYSTEM		
		PAINTING SPEC.	AREA IH-PSA-01		
		MATERIAL	DRAWN BY RINDRA		
	25 APR 2013	OP. PRESSURE	E.L.DIAGRAM		2 of 3
REV.	CHANGE	DATE			



	Created by CAESAR II, © 1984-2006 by COADE, Inc., Houston, Texas, USA Telephone: +1 (281) 860-4686 Website: www.coade.com Support: techsupport@coade.com	PIPING SPEC.	OP. TEMP.	FEED WATER PIPING PIPELINE REFERENCE SUPARNA	REV.
		INSULATION SPEC.	PROJECT NO. IM-PSA-D1		DRG.
		INSULATION THKS.	SYSTEM		
		PAINING SPEC.	AREA IM-PSA-D1		
		MATERIAL	DRAWN BY RINDRA		
		OP. PRESSURE	E.L. DIAGRAM		
26 APR 2013 DATE					3 of 3

