TECH TRANSFER INC.
12141 Wickchester Lane, 700. Houston, TX. 77079
Phone: (713) 462-3636
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ACOUSTICAL PULSATION ANALYSIS REQUEST FORM

CUSTOMER INFORMATION

Packager Quote Number	
Packager – Contact Name	
End User – Site Name	

THE FOLLOWING ANALYSES ARE PERFORMED BASED ON API 618 5TH EDITION FORMULAE AND REQUIREMENTS. CHECK ALL THAT APPLY

ACOUSTICAL ANALYSIS SCOPE

	API 618 5th Edition Design Approach 2 (M2-M4)
	Pulsation Levels, Pulsation Shaking Forces & Pressure Drops (M2-M3)
	A table of various pipe sizes with maximum allowable spans between supports (M4)

PULSATION VESSEL ANALYSIS SCOPE

	API 618 5th Edition Design Approach 3 – Vessel Manifold System Analysis (M5)
	Step 3a – Mechanical natural frequency analysis of compressor pulsation vessel system to avoid coincidence with significant shaking forces
	Step 3b1 - Forced response analysis of the compressor mechanical model will be performed when API 618 separation margins cannot be achieved

PIPING ANALYSIS SCOPE – ON-SKID PROCESS PIPING ONLY

	API 618 5th Edition Design Approach 3 – On-Skid Process Piping Analysis (M7)
	Step 3a – Mechanical natural frequency (MNF) analysis of the on-skid process piping system to avoid coincidence with significant shaking forces
	Step 3b2 - Forced response analysis of the process piping system will be performed when API 618 separation margins cannot be achieved

ON-SKID PIPING ANALYSIS SCOPE – CHECK APPROPRIATE BOXES			
	On Skid Process Piping		On Skid Recycle Piping
	Inter-Stage Piping to and from Cooler		On Skid PSV Piping
	Piping to Aftercooler Inlet		On Skid Blow Down Piping
Note: Piping Downstream of Aftercooler Requires Off-Skid Piping Analysis			

	API 618 5th Edition – On-Skid Process Piping Analysis Scope (M11)
	Process piping system thermal flexibility analysis. As per API 618 5th Edition, this analysis predicts the forces and stresses in the process piping resulting from thermal gradients, thermal transients, pipe and fitting weights and static pressure transients, which are then compared to ASME allowable limits. **Requires above On-Skid M7 analysis scope to be included. Analysis will include same piping scope checked for the M7 analysis.**

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PULSATION VESSEL AND COOLER HEADER NOZZLE LOAD ANALYSES

Check the following boxes for Nozzle Loads to be included in thermal flexibility analysis.

	Process Nozzle Load Analysis – Requires On-Skid M11 Analysis		
	Suction Scrubber Process Inlet/Outlet		Interstage Process Cooler Inlet/Outlet
	Suction Bottle Process Inlet		Process Aftercooler Inlet
	Discharge Bottle Process Outlet		Process Aftercooler Outlet[1]
1 – Requires Off-Skid Discharge to Header Piping to be Included in the Analysis			

OFF-SKID PIPING MECHANICAL NATURAL FREQUENCY AND FLEXIBILITY ANALYSIS

	API 618 5th Edition – Off-Skid Process Piping Analysis Scope (M7)
	Mechanical natural frequency analysis of the on-skid process piping system to avoid coincidence with significant shaking forces.
	Forced response analysis of the process piping system will be performed when the excitation frequency separation margins or the shaking force amplitude guidelines for the piping system cannot be met.

	API 618 5th Edition – Off-Skid Process Piping Analysis Scope (M11)
	Process piping system thermal flexibility analysis. As per API 618 5th Edition, this analysis predicts the forces and stresses in the process piping resulting from thermal gradients, thermal transients, pipe and fitting weights and static pressure transients, which are then compared to ASME allowable limits. **Also Requires above M7 analysis scope.**

	OFF-SKID PROCESS PIPING SCOPE – CHECK APPROPRIATE BOXES		
	Off-Skid to Suction Header		Suction Header to Battery Limit
	Off-Skid to Discharge Header		Discharge Header to Battery Limit
	Single Unit Off-skid Piping Analysis		Multiple Units Off-Skid Piping Analysis

GENERAL INFORMATION

Service		Number of Units		Parallel Analysis	
Number of Cylinders		Number of Stages		Skid Mounted	

Compressor Manufacturer		Compressor Model	
Driver Manufacturer		Driver Model	