

The following is a summary of the initial stress analysis for the Tunnel through Sruwaddacon Bay to establish the boundaries for the 20” gas pipeline. Tables 1 and 2 show that the combined stress is within the allowable pipeline stress defined within the pipeline code. The pipeline stress analysis will be reconfirmed when the Tunnel installation contractor has prepared the proposed method statement for approval. Figure 1 illustrates the combined stress in the Tunnel section for Case B.

Table 1 - Selected Boundary Cases for Hydrostatic Pressure Test

Analysis Case	Internal Pressure	Temperature Differential	Friction Factor	Support Gap	Maximum V.M. Stress	% Allowable Code Stress
	(barg)	(°C)		(mm)	(MPa)	
Case A	504	0	0.05	50	380	87
Case B	504	0	0.50	50	383	88
Case C	504	0	0.05	100	379	87

Notes:

- 1 Allowable stress at 90% SMYS in accordance with I.S. 328 and BS PD8010
- 2 Tunnel not grouted
- 3 Test from Glengad through to Gas Terminal

Table 2 - Selected Boundary Cases for Operation

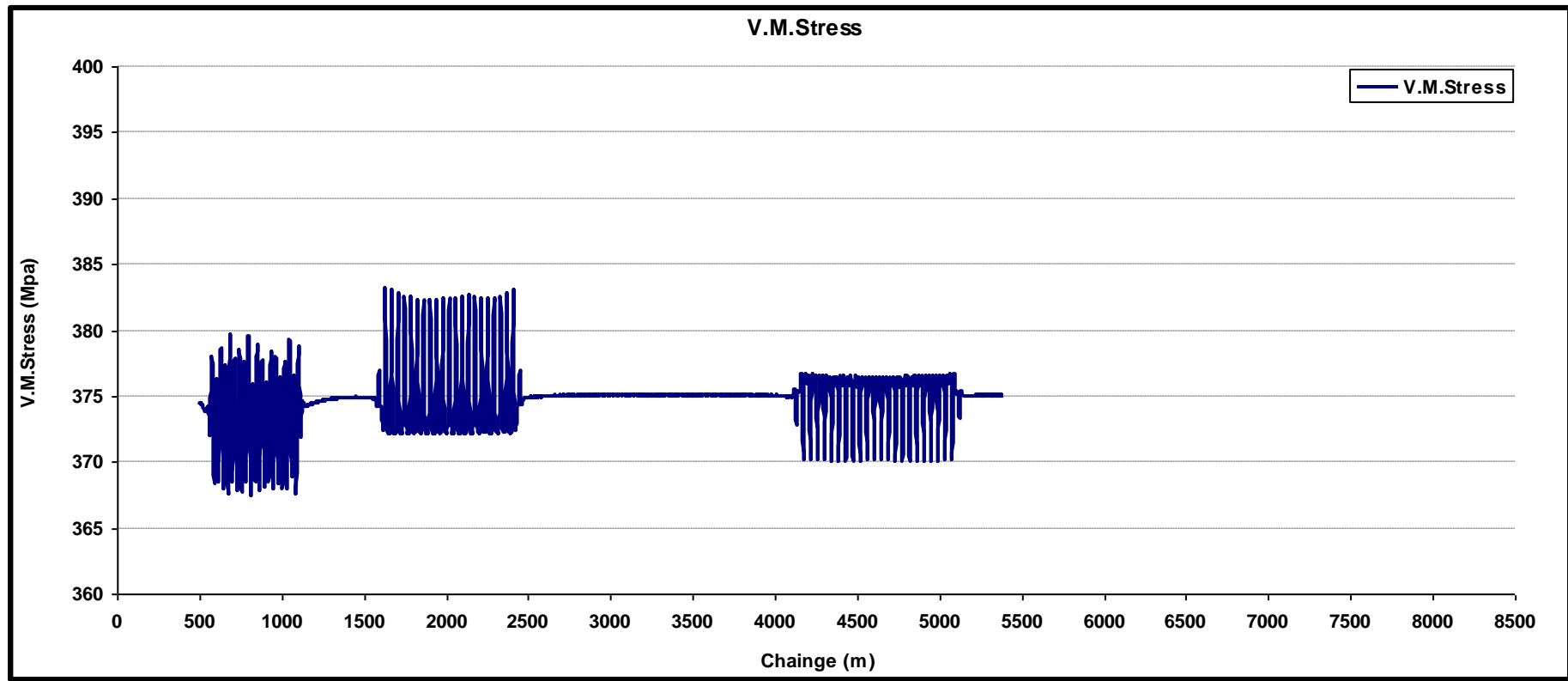
Analysis Case	Temperature Differential	Maximum V.M. Stress	% Allowable Code Stress
	(°C)	(MPa)	
Design Pressure	30	141	32
MAOP	30	107	25

Notes:

- 1 Allowable stress at 90% SMYS in accordance with I.S. 328 and BS PD8010

2 Tunnel fully grouted

Figure 1 – Hydrostatic static Pressure Test: Combined Stress Profile in Tunnel Case B



Note
VM -Von Mises Stress