

February 27, 2020

REPORT OF: Compression Testing

REPORT TO: Shumard Corporation
Attn: Ed Rau
2417 Weaver Street
Fort Worth, TX 76117

DATE APPROVED: February 26, 2020

IDENTIFICATION: 3 ea. 30" Hobas pipes, client identified as A1-A3

PROCEDURES:

Compression testing was performed per ASTM C497-19a using an Instronet Digital Acquisition System i400: iNet-430 in conjunction with a 100Kip Interface Load Cell Model 1232AF-100K S/N:338236A.



Figure 1: Test Set-Up

RESULTS: *Next Page*

Lab No. 38376, Revision 1 (2.28.2020)

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Compression Tests –

Sample ID	Initial Dia. (in)	Dia. at Peak Load (in)	Max Deflection (in)	% Max Deflection	Peak Load (lbf)
A-1	28.890	22.132	6.758	23.4	19,145
A-2	29.252	22.109	7.143	24.4	17,868
A-3	29.456	21.934	7.522	25.5	20,207
Average	29.199	22.058	7.141	24.4	19,073
Std. Dev.	0.287	0.108	0.382	1.1	1,171



Figure 2: Sample Failure

These results are based on the tests performed and are subject to change upon the receipt of new or additional information.

Respectfully submitted,

METALLURGICAL ENGINEERING SERVICES, INC.
Firm Registration No. F-2674

Daniel A. Stolk, PE, CWI
Principle Engineer

Purchase Order No. 20-0217