



**MAXIM**  
TECHNOLOGIES INC

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Report No. 61982  
File No. 141660  
Date: 10/24/96  
P.O. No.: 3682

**Project:** Load Testing of Six I-Rods

#### PROJECT INFORMATION

**Material:** Six - longitudinal half-sections: 18" x 1½" x 0.648" to 0.657"  
**Identification:** I-Rod  
**Date Received:** October 21, 1996      **Technician:** Hugh Myers, Dennis Stanfield  
**Specifications** Per Client      **Date of Test:** October 24, 1996  
**Test Equipment:** Instron 4507, S/N H1963      **Procedure:** Load vs Crosshead Extension

#### TEST PROCEDURE

The I-rods were subjected to compressive loading with a fixture which simulated a 12"OD pipeline. Loading was applied, as shown in Figure No. 1, and crosshead extension was measured at 500 lb intervals. The rods were tested in sets of one, two and three, and a 100 lb pre-load was applied to each test array prior to any measurements. Multiple rods were tested with an 8" center to center width on the exterior rods.

#### TEST RESULTS

The load versus crosshead extension data is presented in the table below and in graphical form on the following page. The test set-up is illustrated in Figure No. 1 and various load-rod combinations are illustrated in Figures No. 2 to No. 7.

Load,lbs	Crosshead Extension, Inches		
	One Rod	Two Rods	Three Rods
500	0.010	0.009	0.015
1,000	0.020	0.014	0.023
1,500	0.028	0.018	0.027
2,000	0.034	0.022	0.030
2,500	0.041	0.025	0.032
3,000	0.045	0.028	0.035
3,500	0.049	0.031	0.037
4,000	0.052	0.034	0.039
4,500	0.055	0.036	0.041
5,000	0.058	0.039	0.043
5,500	0.061	0.042	0.045
6,000	0.064	0.044	0.047
6,500	0.067	0.046	0.048
7,000	0.069	0.048	0.050
7,500	0.072	0.051	0.052
8,000	0.075	0.053	0.053
8,500	0.078	0.055	0.055
9,000	0.081	0.057	0.056
9,500	0.084	0.059	0.058
10,000	0.086	0.061	0.060
10,500	0.089	0.063	0.061
11,000	0.092	0.065	0.063
11,500	0.094	0.067	0.064
12,000	0.097	0.069	0.065

**Deepwater Corrosion Services Inc.**

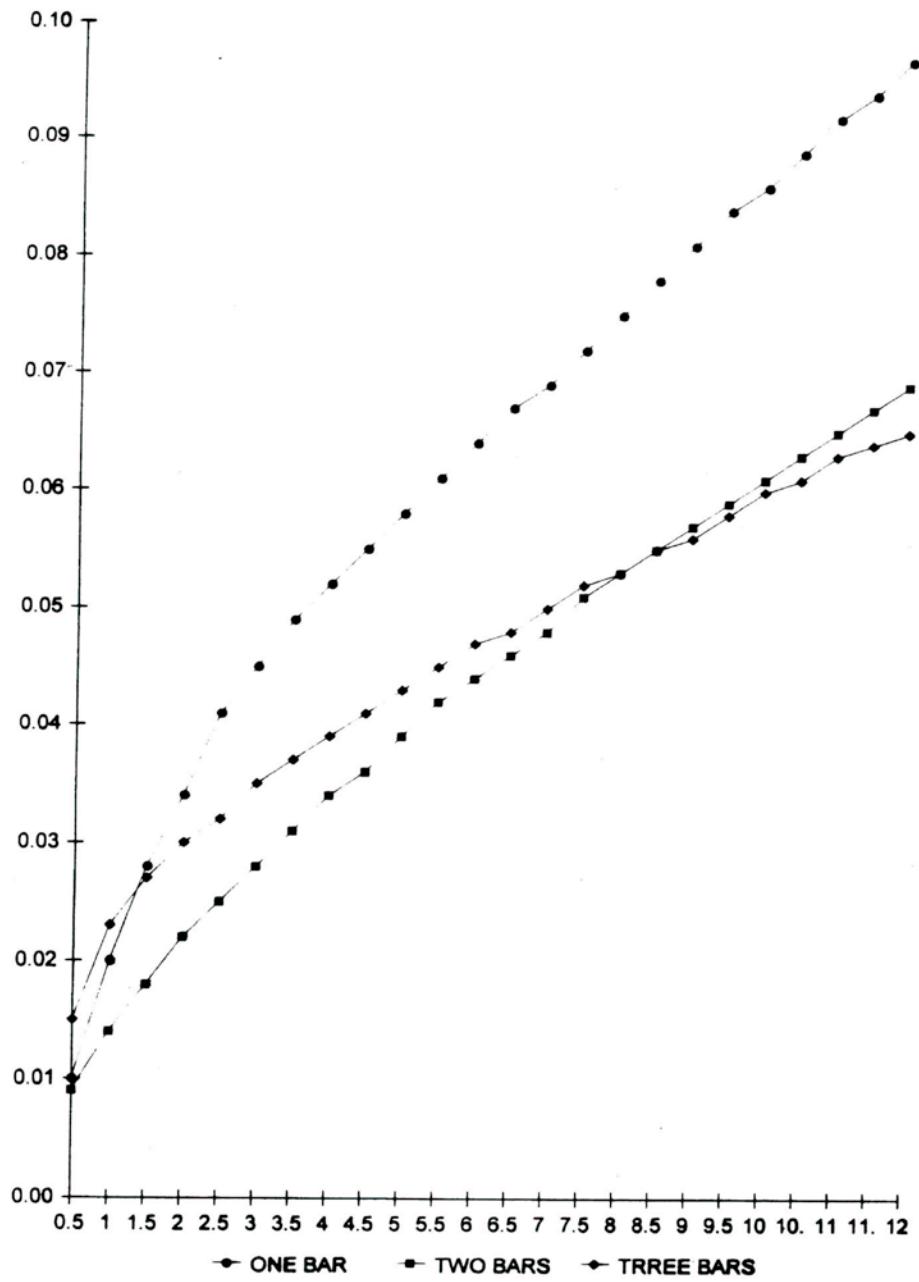
10851 Train Court, Houston, TX 77041 USA

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Specifications subject to change without notice

**LOAD VS CROSSHEAD EXTENSION**

**NOTE:** The submitted material will be discarded after a period of 30 days unless otherwise directed.

MAXIM TECH • SOUTHWESTERN LABS  
*[Signature]*

dsj

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Figure No. 1

Illustration of test set-up.

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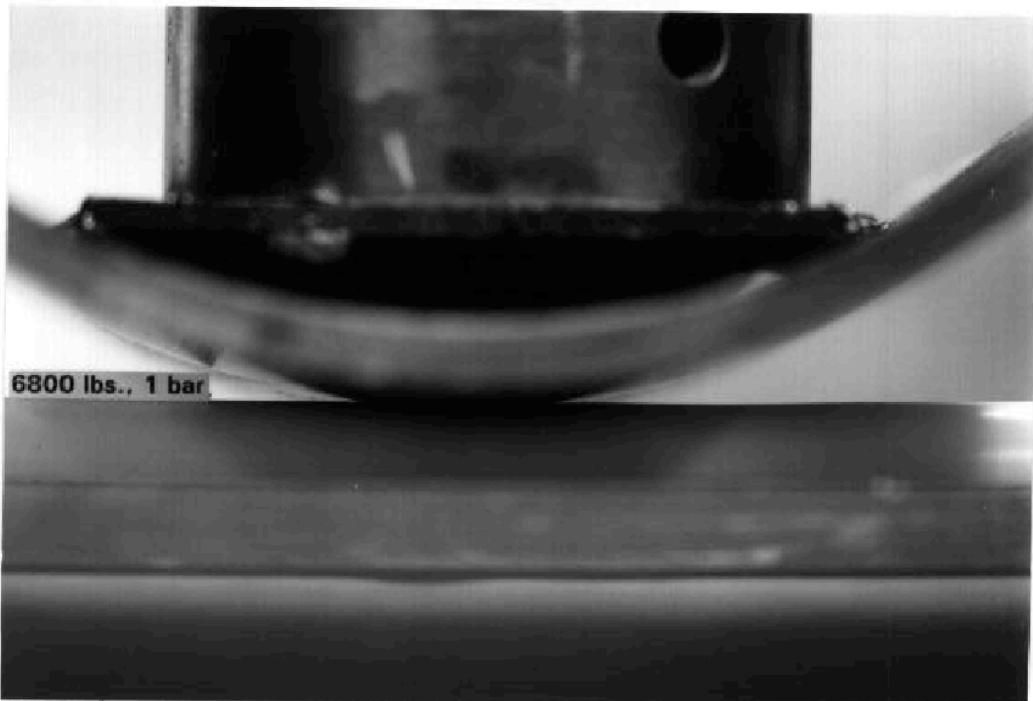


Figure No. 2

One bar, 6800 lbs.

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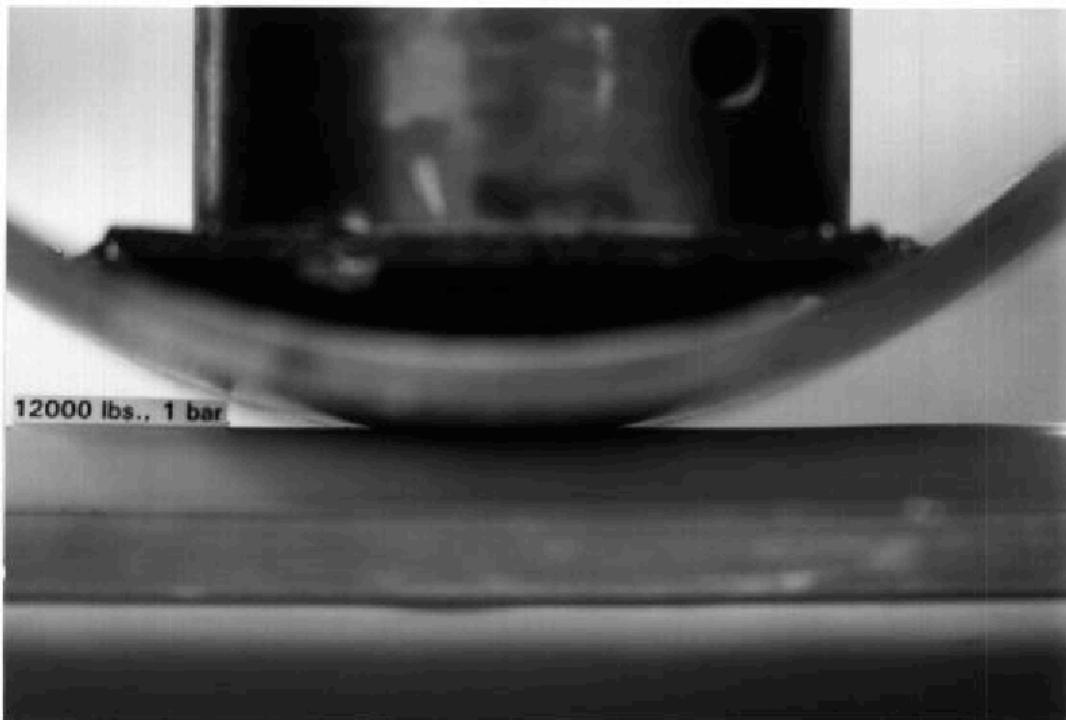


Figure No. 3

One bar, 12,000 lbs.

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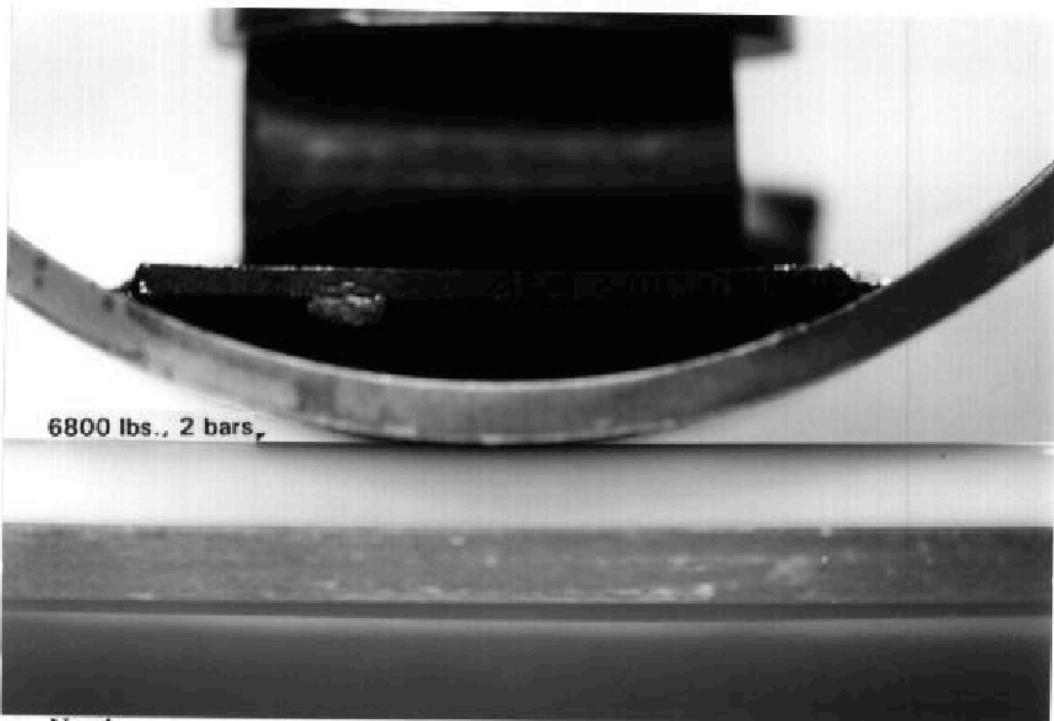
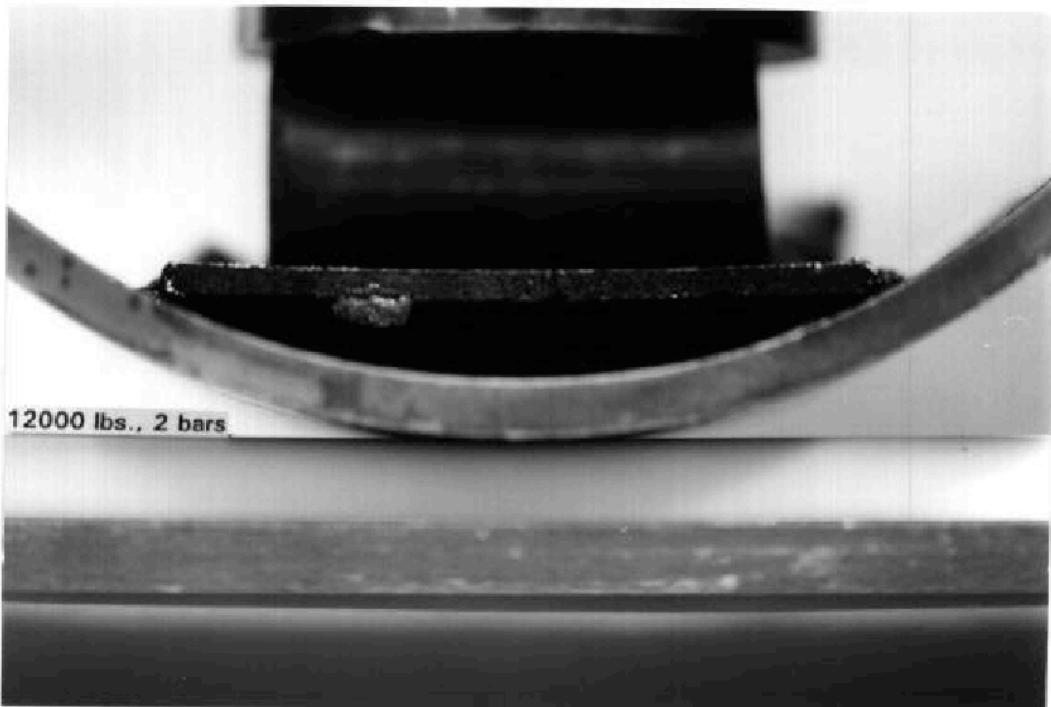


Figure No. 4

Two bars, 6800 lbs.

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**Figure No. 5**

**Two bars, 12,000 lbs.**

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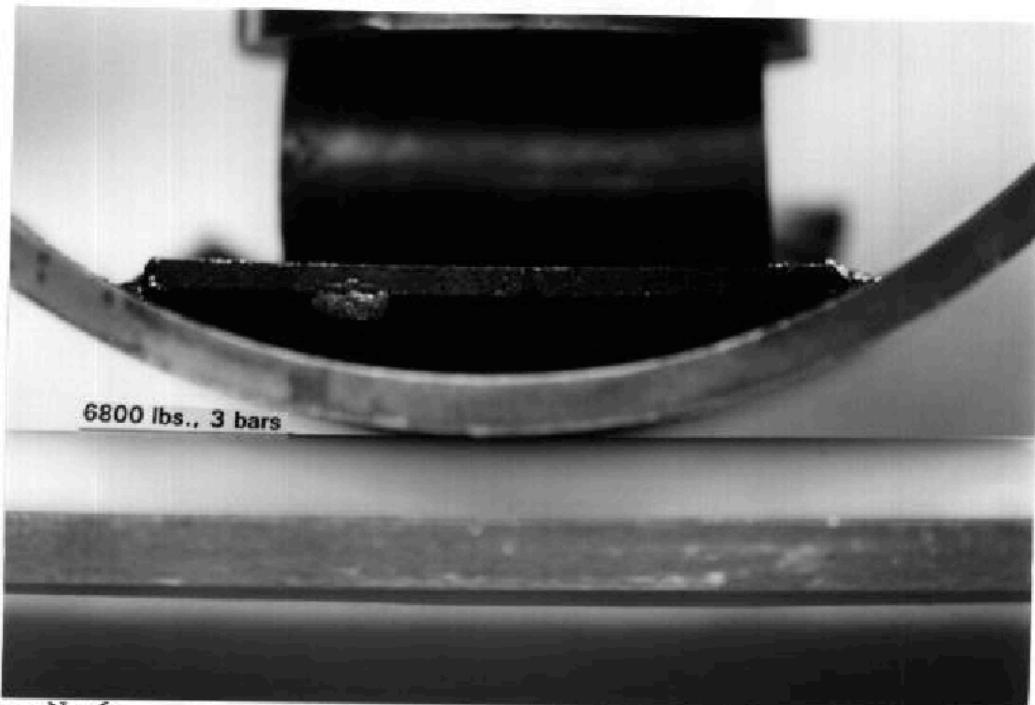


Figure No. 6

Three bars, 6800 lbs.

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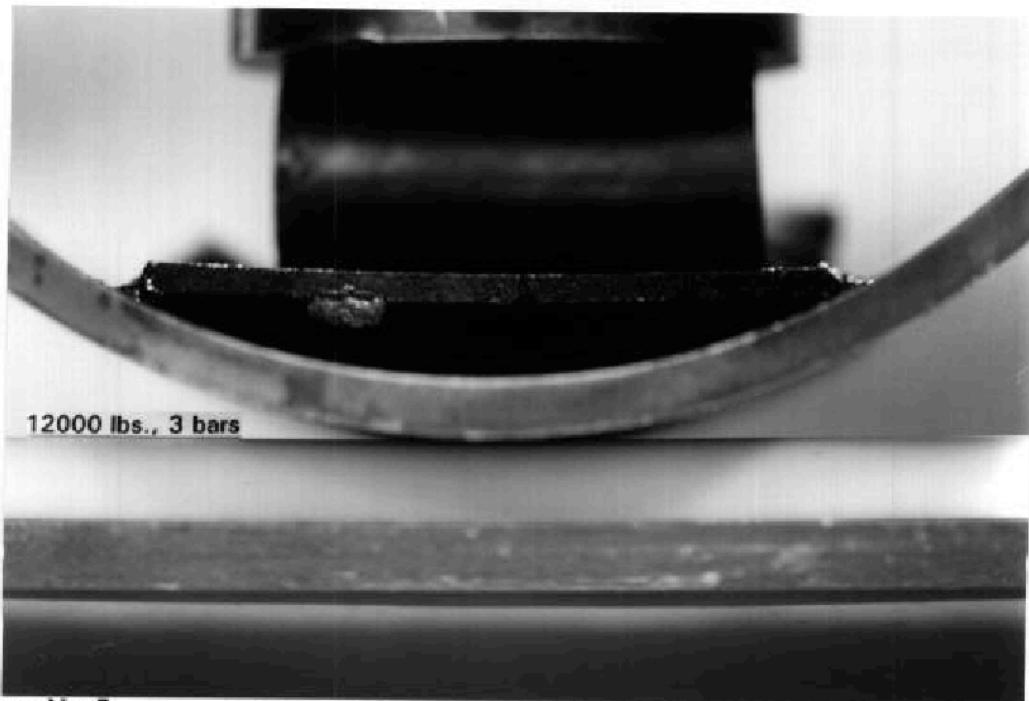


Figure No. 7

Three bars, 12,000 lbs.