

API 589 Second Edition Fire Test Report

Performed for

Teadit North America

558 Garden Oaks Blvd.

Houston, TX 77018

PH (713) 699-0169

www.teadit.net



Style 2000IC
in a 6 inch Class 300 Gate Valve
Project Number: 203113
January 2004



Performed by

YARMOUTH RESEARCH AND TECHNOLOGY

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TEST RESULT SUMMARY API STANDARD 589 - SECOND EDITION

Test Number: PN203113	Test Date: 13-Jan-04
Packing Material: Style 2000IC	
Packing Manufacturer: Teadit	
Test Valve Size: 6" Class 300 Crane Gate Valve - Bonnet Fixture	
Bore Diameter: 1.904	
Stem Diameter: 1.247	
Packing Configuration: 5 rings packing set wih joints staggered	
Packing Compression % of Free Height: 30%	
Packing Gland Bolt Diameter: 5/8 inch	

Torque on Gland Nuts (ft-lb):

	<i>Side A</i>	<i>Side B</i>
As Installed:	50	60
After HydroTest:	50	60
After Burn:	15	20

Leakage Measurements (ml/min):

	<i>Actual</i>	<i>Allowable</i>
During two minute pretest hydrotest:	0.0	0
During burn and cooldown:	0.0	60
During low pressure test:	0.0	3
After operating close and open:	0.4	60

Packing Qualification:

This packing does comply with the performance requirements of this standard.

Test Conducted and Witnessed by



Matthew J. Wasielewski, P.E.



Yarmouth Research and Technology

Customer: Teadit

Test Date: 13-Jan-04

Product Code: Style 2000IC

Project Number: PN203113

Dimensional Information

Initial Packing Height:	1.563	inches
Stem Diameter:	1.247	inches
Bore Diameter:	1.904	inches
Gland Follower ID:	1.288	inches
Gland Follower OD:	1.863	inches
Gland Follower Length:	0.975	inches
Bottom Bushing ID:	1.290	inches
Bottom Bushing OD:	1.880	inches
Bore Depth with Bushing Installed:	1.450	inches

Clearances and Finishes

	Actual	Allowable
Between Stem and Follower:	0.041	.040-.060
Between Follower and Bore:	0.041	.040-.060
Between Stem and Bottom Bushing:	0.043	.040-.060
Between Bottom Bushing and Bore:	0.024	-
Stem Surface Roughness (Ra):	12	32 max.
Bore Surface Roughness (Ra):	125	125 max.

Packing Compression Data

Packing Free Height:	1.563	inches
Packing Compression Amount:	0.468	inches
% Compression:	30%	
Gland adjustment length:	0.620	inches
This height complies with API 600. (.563 minimum)		

Instrumentation

Version of YRT's Fire-Control 589 Software:	B
Differential Pressure Sensor No.:	PT-60-1
Pressure Gauge Number:	PG-1000-2, PG-2000-1 PT-1000-1, PG-100-1
Thermocouple Type:	K
Were all instruments verified to be calibrated to NIST standards?: Yes	

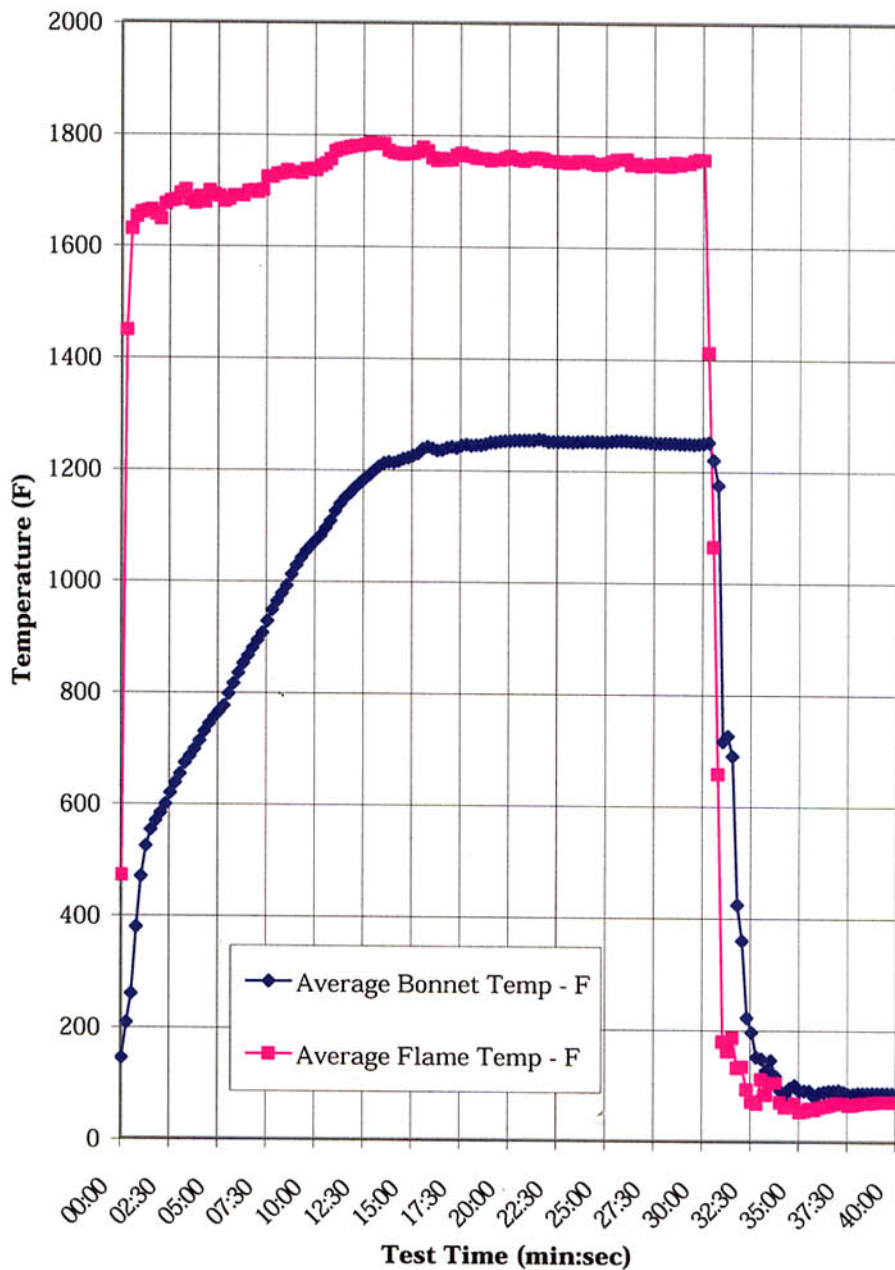
Notes

The gland eyebolts and pins were new.

The bonnet and stem were used, but in very good condition.

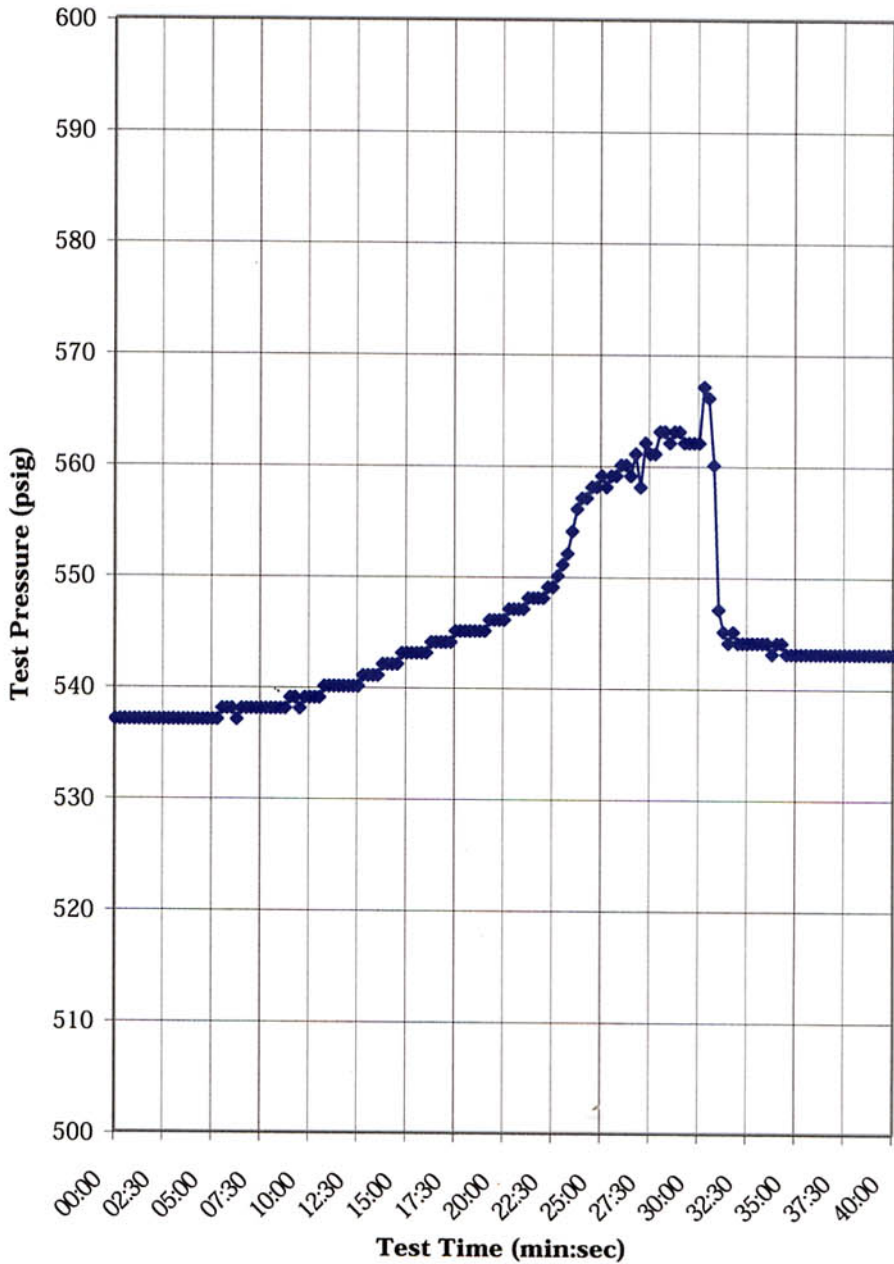
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Temperature vs. Time Chart



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Pressure vs. Time Chart



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Packing received from manufacturer. Five rings cut at 45 deg. angle.

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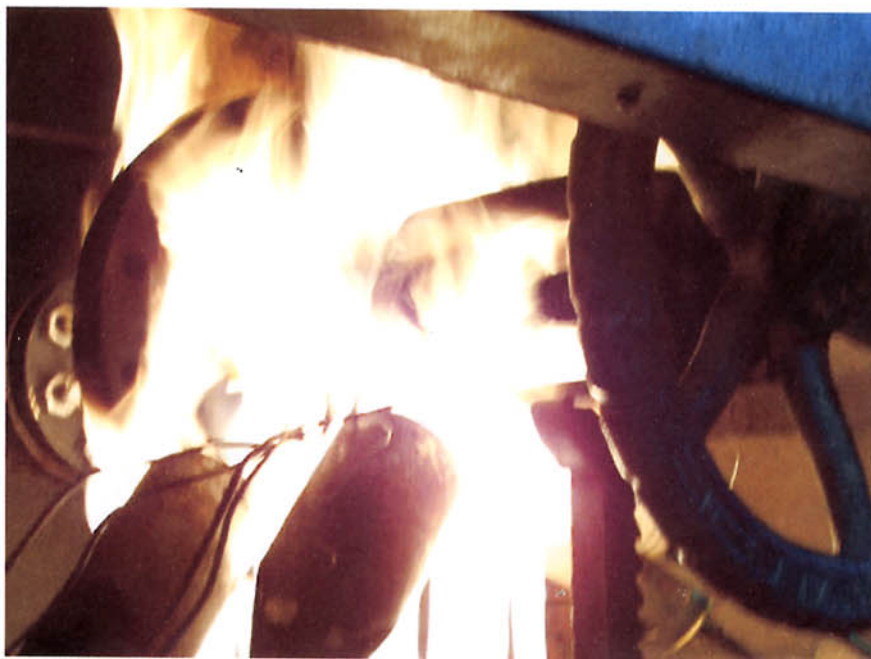


6" Class 300 Bonnet Fixture



During Burn

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Fire Test During Burn

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Packing After Test



Top (left) and Bottom (right) Rings After Test.