

GUJARAT GAS

**HYDROTEST PROCEDURE  
FOR  
NATURAL GAS FILTRATION & PRESSURE REDUCTION SKID**

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NAME OF COMPANY	GUJARAT GAS LTD.		
	NAME	DESIGNATION	SIGN & DATE
Technical Committee (PE-PNG)			
Approved By			



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**1 INTRODUCTION :**

This document defines procedure for Hydrotest to be carried out for Filtration & Pressure Reduction skid. The purpose of carrying out Hydrotest is to check leakage of entire skid.

**2 SCOPE :**

All the Valves/equipments / instruments/ items/spools shall be hydrostatic tested as per approved QAP.

**3 REFERENCE DOCUMENTS :****A) FOR \_\_\_\_\_ SCM:**

Design Documents of Skid		DOCUMENT No.
1	P & ID	
2	GA Drawing	
3	Base frame and Foundation Drawing	
4	Canopy Drawing	
5	Painting datasheet	
<b>Datasheet / Drawing of Equipments:</b>		
4	Active Pressure Control Valve	
5	Monitor Pressure Control Valve + Slam Shut off valve	
6	Pressure Safety valve	
7	Creep Relief Valve	
8	Cartridge Filter	

**B) COMMON DOCUMENTS :**

Design Documents of Skid		DOCUMENT No.
1	Quality assurance plan - Mechanical Items	
2	Quality assurance plan–Instrumentation Equipment	
3	Material Test certificate, Radiography test report, Hydro-test certificate	



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Datasheet / Drawing of Equipments:		
4	Pressure Gauge	
5	Differential Pressure Gauge	
6	Temperature Gauge	
7	Ball Valves	
8	Check Valves	
9	Globe Valve	

#### 4 HYDROSTATIC TEST :

##### 4.1 Flanged end valves:

1. All the flanged end valves shall be pre hydro tested at vendor's place.
2. Before assembly of these valves to skid, these valves are again hydro tested in Vendor shop floor and the same gets witnessed & certified by TPIA.
3. For 300# valves, hydrostatic test pressure shall be – 73.5 Barg.
4. For 150# valves, hydrostatic test pressure shall be – 28.5 Barg.
5. Duration for hydrostatic test procedure shall be 2 minutes for valve sizes up to 4 " & 5 minutes for valves sizes 6" & above, as per API 598/API 6D.

##### 4.2 Pup end or screwed end valves:

1. All pup end (welded) and screwed end valves shall be hydro tested along with pipe spools hydro testing.
2. The hydro testing procedure of pipe spools shall be as mentioned in below pipe spool section.

##### 4.3 Pipe spools:

1. Hydrostatic Test is carried out on each pipe spool during stage inspection of the skid. This inspection is witnessed by TPIA.
2. Hydro test is done by pressurizing each pipe spool using water.
3. For 300# piping, hydro test is done at minimum: 73.5 Barg; for 150# piping, hydro test is done at minimum – 28.5 Barg.
4. Total duration of hydro test is 240 minutes.
5. Line pressure & line temperature are recorded initially, after every 30 minutes & at the end of hydro test.
6. During holding period, there shall not be any pressure drop noticed.
7. At the end of hydro test, Test certificate is signed by both TPIA & Vendor representatives.
8. After completion of hydro static test, piping shall be thoroughly drained & cleaned.



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**4.4 Filters:**

1. Hydro test pressure for filter shall be – 73.5 Barg.
2. Total duration of hydro test for filter shall be 240 minutes.

**4.5 PRV/SSV/PSV/CRV:**

1. Hydro test of PRV shall be carried out as per EN 334
2. Hydrotest of SSV shall be carried out as per EN 14382
3. Hydrotest of PSV & CRV shall be carried out as per API 520/API 526/527

**5 TEST CERTIFICATES:**

Upon completion of the tests mentioned in this document, Test Certificate should be filled with the results and signed/stamped by representatives of all the parties-VENDOR and TPI/Client



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**TEST CERTIFICATE**

**HYDROTEST TEST**

Project            NATURAL GAS FILTRATION & PRESSURE REDUCTION SKID.

Customer        M/S. GUJARAT GAS LTD.

PO. NO.

System No.     --

\_\_\_\_\_  
Vendor

\_\_\_\_\_  
TPIA

\_\_\_\_\_  
Customer

Representative

Representative

DATE: