

## Inspection and Test Plan for Centrifugal Compressor

No.	Inspection and Test Plan	Reference Document	Acceptance Criteria	Verifying Document	Activity By			Remark
					Manuf.	TPI	Client	
1	Pre-Inspection Meeting	Spec.	Spec.	MOM	H	H	H	-
<b>Before Manufacturing</b>								
2	DWG, Design, Calculation Document	API 617	API 617	DWG, Calculation book	H	R	A	-
3	WPS&PQR	ASME	ASME IX	Welding Book	H	R	A	-
4	Welder Qualification Certificates	ASME	ASME IX	Certificates	H	R	-	-
5	NDT procedure	ASME	ASME V,VIII, IX	Procedures	H	R	A	-
6	NDE Personnel Certificates	ASME	ASME V	Certificates	H	R	-	-
7	PWHT Procedure (if needed)	API 617	API 617	Procedure	H	R	A	-
8	Compressor Impeller Dynamic and Overspeed Test Procedure	API 617	API 617	Procedure	H	R	A	-
9	Compressor Mechanical Running Test Procedure	API 617	API 617	Procedure	H	R	A	-
10	Compressor Strip Down Test Procedure	API 617	API 617	Procedure	H	R	A	-
11	Compressor Performance Test Procedure	ASME PTC 10	ASME PTC 10	Procedure	H	R	A	-
12	Casing Hydro Static Test Procedure	API 617/ASME VIII	ASME VIII	Procedure	H	R	A	-

13	Painting Procedure	ASME	Spec.	Procedure	H	R	A	-
<b>Materials</b>								
14	Material Certificates	ASME/ASTM	ASME II/ASTM	Original Material Certificates	H	R	-	-
15	Material Identification	ASME	ASME	Report	H	W	-	-
16	Visual, Dimension and Marking Control	ASME/ASTM	ASME/ASTM	Report	H	W	-	-
<b>During Manufacturing</b>								
17	Casing Visual Inspection for Damage	API 617	API 617	Report	H	W	-	-
18	Casing Dimensional Check to Drawing Requirements	DWG	DWG	Report	H	W	-	-
19	Casing Welding Repair Inspection	ASME	ASME	Report	H	H		
20	Visual Examination of Welded on Connections	ASME	DWG, ASME VIII	Report	H	W	-	-
21	Casing NDE Examination	API 617/ASME	API 617/ASME	Report	H	SW	-	-
22	Casing Hydrostatic Testing	Procedure/API 617	Procedure/API 617	Report	H	H	-	-
23	Casing Heat Treatment Review	Procedure	Procedure	Report	H	R		
24	Impeller Welding Inspection(if welded)	ASME	ASME	Report	H	SW	-	-
25	Impeller NDE Examination	API 617/ASME	API 617/ASME	Report	H	SW	-	-
26	Impeller Dynamic Balance Test	API 617	API 617	Report	H	H	-	-

27	Impeller Overspeed Test	API 617	API 617	Report	H	H	-	-
28	NDE Examination after Impeller Overspeed Test	API 617/ASME	API 617/ASME	Report	H	W	-	-
29	Compressor Component Mounting Control	API 617	API 617	Report	H	SW	-	-
30	Mechanical Running Testing	API 617	API 617	Report	H	H	-	-
31	Strip Down Inspection	API 617	API 617	Report	H	H	-	-
32	Performance Test	ASME PTC 10	ASME PTC 10	Report	H	H		
<b>Final Inspection</b>								
33	Final Visual & Dimensional Check	DWG/Spec.	DWG	Report	H	H	-	-
34	Surface Preparation and Painting	Procedure	SSSP/Spec.	Report	H	H	-	-
35	Check of Name Plate	DWG	DWG	-	H	H	-	-
36	Check of Final Book	-	Spec.	DWG/ P.O	H	R		
<b>Documentation</b>								
37	Inspection Reports	-	Spec./DWG	Report	H	R	-	-
38	NCR	-	Spec./DWG	Report	H	R		-
39	Review Final Data Report	-	Spec./DWG	-	H	R		-
<b>Pre-Shipment Inspection</b>								
40	Preservation and Packing	-	Spec.	MOM	H	H	-	-

41	Marking	Spec.	Spec.	Report	H	H		-
42	Loading Inspection	Spec.	Spec.	Report	H	H	-	-
43	Shipping Document Control	Procedure	Spec.	Packing List	H	H	-	-
auxiliary equipment such as lube oil system, filter, silencers, strainer, piping, steel structure and etc. are not included to this ITP								

### Abbreviations:

**H:** Hold Point = Hold on the production till TPI Inspector performs inspection and supervise the required test

**W:** Witness Point = Manufacture shall notify client and TPI Inspector but there is no hold on the production; Client can waive this inspection based on his discretion and informs TPI Inspector accordingly.

**R:** Document Review = Review means Review document, which includes of material test certificates, WPS, PQR, NDT Procedures and etc.

**A:** Approval

**SW:** Spot Witness = for items with spot witness manufacture shall notify TPI inspector as fulfilling the monitoring; For example one random visit for whole UT tests or one or two visits for whole surface preparation works for painting.

**MOM:** Minute of Meeting

**P.O:** Purchase Order

for more information review following articles:

<http://www.inspection-for-industry.com/third-party-inspection-for-centrifugal-compressor.html>

<http://www.inspection-for-industry.com/inspection-and-test-plan-for-centrifugal-compressor.html>

<http://www.inspection-for-industry.com/factory-acceptance-test-for-centrifugal-compressor.html>