REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
01	14-09-2023	Issued for Approval	S.K.	J.J.	S.K.

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Hydrostatic test

This procedure is applicable to all items subject to a hydrostatic test. Refer to project Inspection & Test Plan for the items subject to a hydrostatic test.

Following procedures will be maintained before and during testing:

- Before test, tested equipment will be inspected properly by the Airpack quality manager.
- Two calibrated pressure gauges will be installed on the highest and lowest position clearly readable.
- Test pressure will be between 50% and 75% of range of used pressure gauges (where possible)
- Used gauges are direct reading type and pressure should be stable during testing.
- Duration of test will be 30 minutes as required per authorities code (ASME B31.3 for piping and ASME VIII latest edition for vessels)
- Prior to carrying out the hydrostatic test, weld of reinforcing pad will be leak tested (max 1 bar(g)) by air via tell tail hole and inspected with soap and water (if applicable).
- All oil, grease, dirt and foreign material will be removed.
- Start and end pressure will be recorded by hand during hydro test.

Below Items are tested separately, no complete hydrostatic test of package is done.

Cooling water piping (carbon steel)

This test is executed by sup-supplier or Airpack. For hydrostatic tests a suitable positive displacement pump is available to supply a maximum pressure. Water will be of non-chloride type (max. 200 ppm - Cl_2), temperature approximately 20°C. Tests are non-witnessed by client as per ITP.

Hydrostatic test pressure: 1.5x design pressure for the following items (as per P&ID drawing 17735-03)

- Piping cooling water inlet / inter- aftercooler : 8,25 bar(g)
- Piping inter- aftercooler / cooling water outlet : 5,25 bar(g)

Main Process Air Piping (SS316)

This test is executed by sup-supplier or Airpack. For hydrostatic tests a suitable positive displacement pump is available to supply a maximum pressure. Water will be of non-chloride type (max. 10 ppm - Cl_2), temperature approximately 20°C. Tests are non-witnessed by client as per ITP.

Hydrostatic test pressure: 1.5x design pressure for the following items (as per P&ID drawing 17735-03)

- Piping 1st stage suction / inlet : 18,75 bar(g)
- Piping 1st stage discharge / 2nd stage suction : 37,5 bar(g)
- Piping 2nd stage discharge : 51 bar(g)

Inter- Aftercooler

This test is executed by sup-supplier or Airpack. For hydrostatic tests a suitable positive displacement pump is available to supply a maximum pressure. Water will be of non-chloride type (max. 200 ppm - Cl_2), temperature approximately 20°C. Tests are non-witnessed by client as per ITP.

Hydrostatic test pressure: 1.5x design pressure for the following items (as per P&ID drawing 17735-03)

- Intercooler E-001 shell (CS) : 37,5 bar(g)
- Intercooler E-001 Tubes (SS316) : 8,25 bar(g)
- Intercooler E-002 shell (CS) : 51 bar(g)
- Intercooler E-002 Tubes (SS316) : 8,25 bar(g)

Pulsation Dampeners (carbon steel)

This test is executed by sup-supplier or Airpack. For hydrostatic tests a suitable positive displacement pump is available to supply a maximum pressure. Water will be of non-chloride type (max. 200 ppm - Cl_2), temperature approximately 20°C. Tests are non-witnessed by client as per ITP.

Hydrostatic test pressure: 1.5x design pressure for the following items (as per P&ID drawing 17735-03)

- Pulsation dampener V-001 : 18,75 bar(g)
- Pulsation dampener V-002 : 37,5 bar(g)
- Pulsation dampener V-003 : 37,5 bar(g)
- Pulsation dampener V-004 : 51 bar(g)

Compressor pressure parts

This test is executed by sup-supplier or Airpack. For hydrostatic tests a suitable positive displacement pump is available to supply a maximum pressure. Water will be of non-chloride type (max. 200 ppm - Cl_2), temperature approximately 20°C. Tests are non-witnessed by client as per ITP.

Hydrostatic test pressure will be 1.5x design pressure. (37,5 bar(g) / 51 bar(g)) and as per approved datasheet.

After test,

- Equipment must be free from any unexpected condition
- Equipment will be dried and cleaned appropriately. Stainless steel will be cleaned by pressurized air.
- Witnessed test report shall be issued by QA department.

Hydrostatic test will be done after completion of all welding and before any painting activities

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HYDROSTATIC TEST CERTIFICATE

Customer :
Purchase Order number :
Equipment :
Airpack reference :
Serial number :
Date :

We certify that the here under mentioned test data is true and correct.
The test procedure is in accordance with ASME B31.3 & Hydrostatic Test Procedure doc number : 17735-17

Subject name :
Subject number :
Drawing no. :
Test no. : 01 of 0X

HYDROSTATIC TEST:

Fluid: :
Test date :
Constant during : 30 min.
Test pressure :

RECORDED PRESSURES

Start pressure :
End pressure :

Test pressure gauge number :

Remarks (If any) :

In presence of :

Airpack Approval: Customer Approval: