

PRESSURE TEST

FORTEC

A. General.

The composite system applied by contractor, in the presence, pressure test has been carried out to show performance of this composite material.

B. Schedule of Pressure Test

Contractor performed the pressure test on November 16th up to 19th, 2012

C. Testing Sequences

1. Testing material

Diameter and thickness of pipes to be used \varnothing 6" sch 160 with both end Flange 6"-900# sch 160, blind flanges 6#-900# c/w stud bolts & nuts.

2. Surface Preparation.

- a. Abrasive Material : Volcano Grid & Garnet
- b. Grade of Cleanliness : SA 2,5 .
- c. Surface Roughness : 75 to 80 micron.

D. Material Fortec:

- 1. Fortec.M.Resin Part.A, Lot no: 10101301 (0.500kg) expired date, 05/01/2012
- 2. Fortec.M.PSL Part.B, Lot no: 10101108 (0.500kg) expired date, 05/01/2012
- 3. Fortec.G.SL Part.A, Lot no: 1101197 (0.40 kg) expired date, 01/02/2012
- 4. Fortec.G.SL Part.B, Lot no: 1101196 (0.40 kg) expired date, 01/02/2012
- 5. Fortec.TB (12 / 10650 for Substrate
- 6. Blue plastic Film

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E. Personnel:

- 1. Suwito. (Supervisor)
- 2. Arsuni. (QC)
- 3. M.Gafur. (QC)
- 4. Israni. (Blaster/Painter)
- 5. M.Syahril. (Blaster/Painter)
- 6. Sarwansyah. (Fortec Applicator)
- 7. M.Yusuf. (Fortec Applicator)
- 8. Minardi. (Utility assistant)
- 9. Iksan. (Utility assistant)

Check Weather Condition Time 08:00

Dry	33
Wet	28
RH	69
Dew Point	26
S .Temperature	39

Check Weather Condition Time 15:20

Dry	29
Wet	26
RH	79
Dew Point	25
S .Temperature	34.2

1. Blotter Test ASTMD 4285.

- Result : Free From Water & Oil Contamination
- Status of Test : Accepted

2. Ambient Condition.

- Surface Temperature : 29°C
- Humidity : 73%

2. Abrasive Material

- Material : Volcano Grit & Garnet
- Status of Test : N/A

3. Start Blasting Time: 08:00 & Finish 08:30

- Result : Good
- Status of Test : Accepted

4. Surface Preparation.

- Dust Level.
Result : Level 2
- Cleanliness.

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➤ Result : Cleanliness Accepted Visually

5. Application of Fortec.M for Hole Pipe Time 09:20

➤ Result : Good

➤ Status of Test : Accepted

6. 1st application for Fortec .G SL & Fortec TB Time 09:40 & Finish Time 10:20

➤ Result : Good

➤ Status of Test : Accepted

8. Cove/compressor with Blue plastic film Time 10:25 & Finish Time 10:45

➤ Result : Good

➤ Status of Test : Accepted

9. 2nd & 3rd application for Fortec.G SL & Fortec TB Time 13:05 & Finish Time 14:05

➤ Result : Good

➤ Status of Test : Accepted

10. Cover with Blue Film Time 14:10 & Finish 14:30

➤ Result : Good

➤ Status of Test : Accepted

11. 4th & 5th application for Fortec.G SL & Fortec TB Time 16:30 & Finish Time 17:30

➤ Result : Good

➤ Status of Test : Accepted

10. Cover with Blue Film Time 15:35 & Finish 17:55

➤ Result : Good

➤ Status of Test : Accepted

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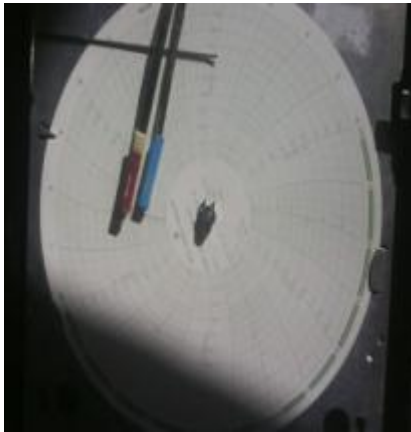


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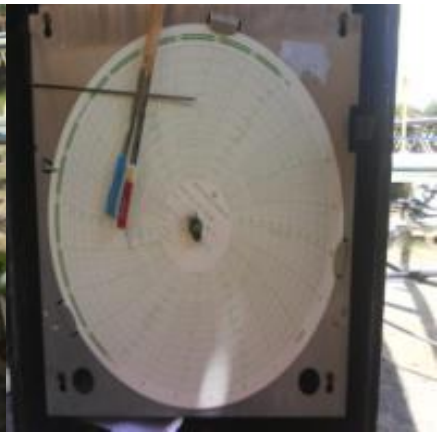
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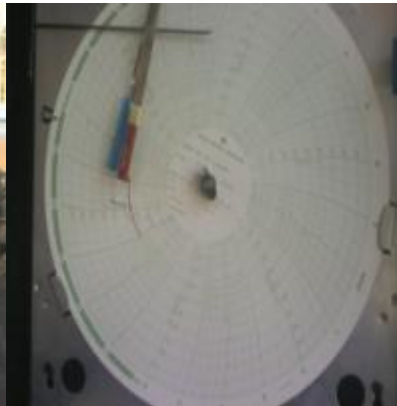
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PRESSURE TEST HYDROTEST

1. **Adhesion Test** : Adhesion test are carried out using chisel / scrapper to peel composite wrapping, inspect bonding strength by visually only

2. **Pressure Test,** : Time 09:00

Result : Performance for 5 layer of FORTEC with Pressure 180 Bar up to 300 Bar

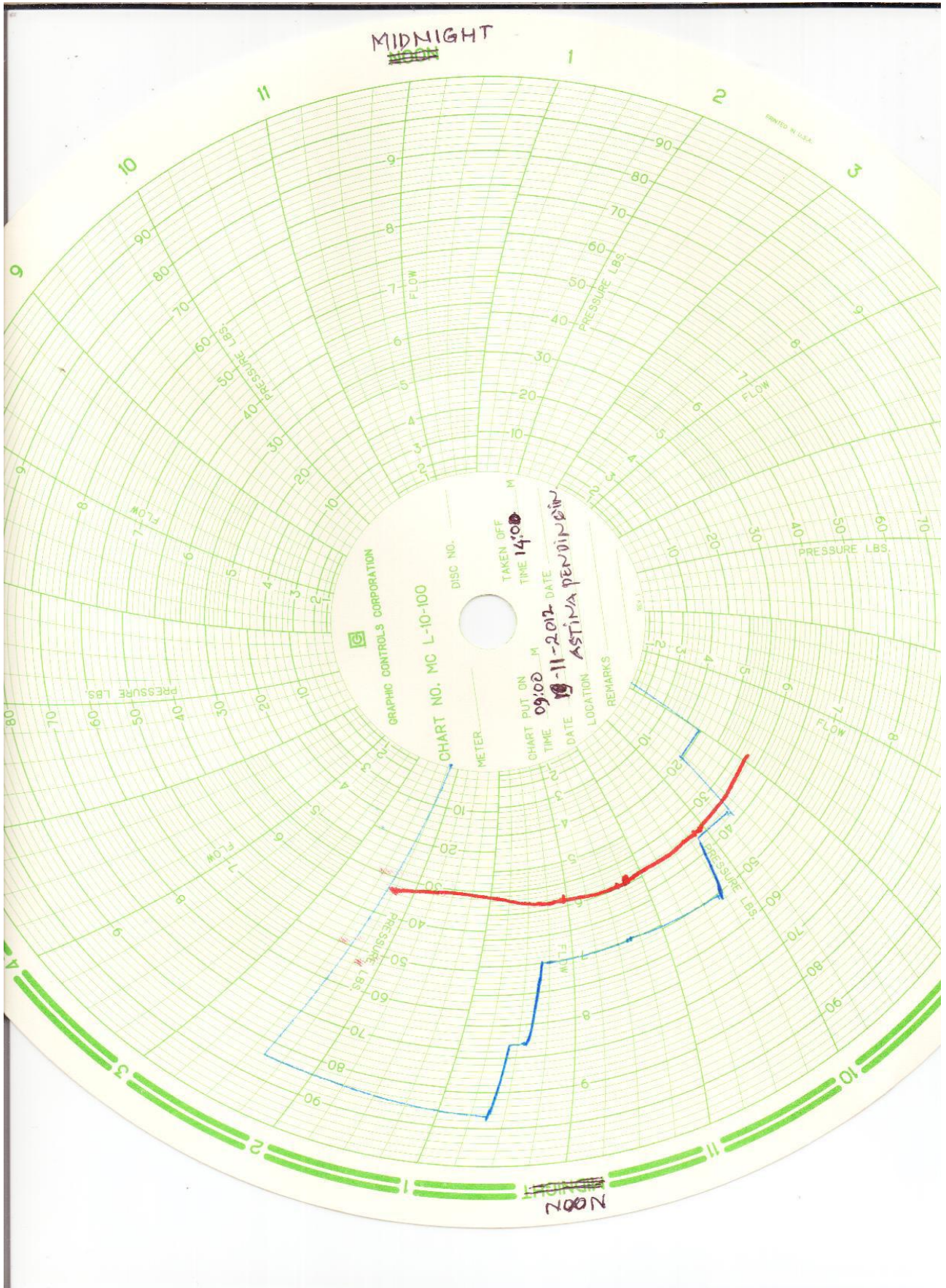
Design : Detail of test

1. Pressure 70 bar Holding Time 30 Minute.
2. Pressure 130 bar Holding Time 30 Minute.
3. Pressure 180 bar Holding Time 2 Hour.
4. Pressure 300 bar Holding time 2 Hour.

Status of Test : Accepted

The pressure test is stopped up to 300 bar due to the capacity of pressure test equipment limited up to 300 bar only, no leaking at the FORTEC application area.

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