

INDIAN FARMERS FERTILISER COOPERATIVE LTD.
PARADEEP UNIT
THICKNESS MEASUREMENT REPORT



MWR no. & Date	Plant PAP	Section Mechanical
Testing eqpt. Details Parametrics	Accuracy ± 0.01mm	Ref sketch no.
Eqpt. / Line no description vacuum cooler 113, Impeller, Liner, Casting		Date of testing 9-4-2014

Design thickness

Pt. No.	Pipe size	Measured thk. in mm	Pt. No.	Pipe size	Measured thk. in mm	Ref. sketch
		Impeller new	4		8.75, 18.27	
		Blade -	5		7.37, 17.46	
1		26.87, 26.82	6		10.17, 20.15	
2		26.27, 26.28			Body conical portion	
3		26.69, 26.83			27.32	
4		26.92, 26.90			Side - 24.86,	
5		26.77, 26.87			27.53, 21.02	
6		26.88, 26.86			Casting outside	
		Body conical portion			6.02, 9.12, 9.17	
		24.22, 22.15			5.07, 8.92, 7.80	
		Side - 26.32,			8.05, 5.16.	
		26.86, 26.59				
		Liner				
		5.92, 7.11, 6.77				
		8.53, 6.98, 6.99				
		6.80				
		Impeller old				
		Blade				
1		9.71, 17.61				
3		7.76				

Remarks:

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MWR no. & Date _____	Plant PAP	Section _____
Testing eqpt. Details DM40A	Accuracy $\pm 0.1mm$	Ref sketch no. _____
Eqpt. / Line no description Thickness measurement of 113 vacuum cooled circulation pump casing		Date of testing 24/02/2011

Design thickness

Pt. No.	Pipe size	Measured thk. in mm	Pt. No.	Pipe size	Measured thk. in mm	Ref. sketch		
		Bottom			16.1, 14.2, 12.9, 6.7, 8.4, 7.3, 8.6, 11.3, 11.4, 9.8, 12.4, 17.4, 19.0, 11.5, 17.2, 19.6, 18.5, 15.9, 17.8, 14.0, 12.8, 17.5, 17.1, 18.5, 19.2, 20.8, 20.0, 18.5, 18.9, 15.2, 9.8, 10.2, 11.3, 19.9, 20.4, 20.7, 19.7, 20.2, 15.2, 13.7, 15.7, 13.5, 9.1, 9.2, 7.2, 8.3, 9.7, 9.4, 7.6, 6.1, 7.7, 9.7, 11.5, 15.6, 12.9, 14.5			
		Top			North 4.5, 3.2, 3.0, 3.2, 9.3, 8.2, 16.2, 15.1, 13.6, 13.0, 13.5, 17.3, 20.3, 24.8, 22.2, 22.4, 25.1, 22.1, 25.1, 14.0, 21.9, 22.7, 21.3, 24.2 South 7.2, 6.6, 8.0, 7.9, 7.7, 5.5, 6.0, 5.6, 5.1, 4.0, 8.5, 14.6, 14.9, 15.3, 16.0, 12.7, 13.4, 16.0, 24.5, 23.9, 24.8, 23.1, 25.6, 23.3, 21.4, 23.5, 22.7, 21.7, 21.7			

Remarks:

MIN	MAX
3.0	25.6

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INDIAN FARMERS FERTILISER COOPERATIVE LTD.
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THICKNESS MEASUREMENT REPORT



MWR no. & Date	Plant PAP	Section mech.
Testing eqpt. Details D.M ADL	Accuracy ± 0.1 mm	Ref sketch no.
Eqpt. / Line no description Thickness measurement of vacuum cooler 113 casting		Date of testing 14/12/2010

Design thickness

Pt. No.	Pipe size	Measured thk. in mm	Pt. No.	Pipe size	Measured thk. in mm	Ref. sketch
①		TOP 2.8, 3.9, 9.8 6.0			West to Bottom 9.4, 15.9, 20.7, 20.3, 18.7, 20.9 18.3, 19.4, 19.6	Vacuum cooler 113 casting
		Bottom Patch Plate			North 26.7, 23.4, 25.3 23.5, 19.9, 26.7 25.8, 25.4	
		North 4.3, 3.5, 4.6 4.9			South 25.5, 23.5, 23.3 20.7, 18.9, 27.4	
		South - 6.3, 8.8, 5.9, 5.2, 5.7, 7.0 7.3, 5.9, 7.3, 4.4, 3.0, 7.8, 2.4				
②		East to Top 12.6, 8.7, 3.9 16.5, 8.7, 9.4 12.1, 27.4, 20.1 19.9,				

Remarks: minimum thickness were observed 2.4 in South side position, which is as mentioned on the ref. sketch, near the Patch Plate.

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INDIAN FARMERS FERTILISER COOPERATIVE LTD.
PARADEEP UNIT
THICKNESS MEASUREMENT REPORT



MWR no. & Date	Plant <u>PAP Reactor Area</u>	Section <u>Mechanical</u>
Testing eqpt. Details <u>DMS DE</u>	Accuracy <u>±0.01mm</u>	Ref sketch no.
Eqpt. / Line no description <u>ENSIBAL vacuum cooler Circulation pump spare cooling</u>		Date of testing <u>31-8-2013</u>

Design thickness

Pt. No.	Pipe size	Measured thk. in mm	Pt. No.	Pipe size	Measured thk. in mm	Ref. sketch	
<u>1</u>		<u>9.87, 10.05, 10.43</u>			<u>8.79, 7.71, 7.80,</u>		
		<u>10.56, 10.58, 10.64</u>			<u>8.28</u>		
		<u>10.35, 10.62, 10.69</u>			<u>4</u>		<u>3.54, 4.61, 5.57, 5.57</u>
		<u>10.25, 10.28, 10.08</u>					<u>5.56, 3.72, 5.17</u>
		<u>9.97, 9.69, 9.76</u>					<u>5.55, 4.30, 2.92</u>
		<u>9.53, 9.52</u>					<u>2.77, 1.77, 1.77, 6.26</u>
<u>2</u>		<u>9.18, 8.88, 8.97</u>			<u>8.18, 8.53, 7.78</u>		
		<u>9.12, 8.91, 9.55</u>			<u>6.68, 7.71, 7.88</u>		
		<u>9.92, 10.34, 10.09</u>			<u>7.14, 5.89, 6.59</u>		
		<u>9.32, 8.92, 9.58</u>			<u>2.92</u>		
		<u>10.12, 8.87, 7.67</u>			<u>5</u>		<u>Patch Area - 5.81, 6.46</u>
		<u>9.90, 10.22, 10.34</u>					<u>6.10, 5.89, 3.90, 4.31</u>
<u>3</u>		<u>10.11, 9.80, 7.02</u>			<u>5.52, 5.07, 4.73,</u>		
		<u>10.16, 9.32, 9.57</u>			<u>3.72, 1.76, 2.60,</u>		
		<u>7.47, 7.18, 7.65</u>			<u>5.56, 4.27, 2.56,</u>		
		<u>7.18, 8.28, 7.11</u>			<u>5.17, 5.19, 4.70</u>		
		<u>7.29, 10.31, 9.99</u>			<u>6</u>		<u>8.18, 8.85, 8.92, 8.60</u>
		<u>9.20, 8.92, 8.67</u>					<u>9.13, 7.58, 8.86, 9.74</u>
Remarks:					<u>8.70, 8.52, 7.56,</u>		
					<u>7.28, 5.85, 8.62</u>		<u>8.98, 7.27, 7.33, 5.07</u>
							<u>5.91, 8.32, 9.78, 9.39</u>
					<u>10.81, 8.86, 8.90, 8.57</u>		

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INDIAN FARMERS FERTILISER COOPERATIVE LTD.
 PARADEEP UNIT
 THICKNESS MEASUREMENT REPORT



MWR no. & Date	Plant PAP Reactor Area	Section Mechanical
Testing eqpt. Details DMSE	Accuracy ± 0.01mm	Ref sketch no.
Eqpt. / Line no description Reco vacuum cooler circulation pump spare casing	Date of testing 31-8-2013	

Design thickness

Pt. No.	Pipe size	Measured thk. in mm	Pt. No.	Pipe size	Measured thk. in mm	Ref. sketch
		TOP Position -			24.72, 9.34	
		22.52, 22.15, 21.11			Bottom position -	
		19.77, 19.70, 23.38			21.37, 24.12, 24.73	
		19.77, 20.49, 18.22			20.68, 23.62, 20.67	
		17.58, 20.26			20.05, 22.22, 24.24	
		Near Patch Area			24.46, 24.24, 24.27	
		4.72, 7.86, 3.74			21.25, 24.35, 24.35	
		3.00, 8.83, 8.20				
		4.57, 5.10, 8.71				
		8.75, 7.97, 7.21, 5.20				
		3.00, 4.92, 3.43, 6.43				
		East side - 21.77				
		19.87, 18.31, 19.28,				
		20.31, 18.23, 19.73				
		19.70, 22.69, 22.73				
		24.52, 24.17, 17.58				
		West side -				
		17.88, 20.34, 15.12				
		12.42, 3.02, 9.84				
		20.78, 23.33, 22.99				

Remarks:

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