

## Thermography Report

**Client:** - AMBUJA CEMENT LIMITED  
RAWAN (C.G.)

### Consultants from Tempsens

1. ALPESH PARAKH

### Principal Officer from Client's Side

1. Mr. YSG RAO
2. Mr. JITENDRA VERMA

**Dates of the assignment at site:** 09.06.2008 TO 13.06.2008

### Project Objective: -

To find abnormalities in Electrical terminations in live conditions so that it helps the Instrumentation and electrical department to take predictive maintenance during forthcoming shut down

### Work done: -

Thermo grams of all the electrical panels, bus bars, electrical joints, mcc, pcc were taken as directed and desired by the client. These thermo grams were then downloaded in the computer for further analysis.

### Findings: -

Exceptions were found where some maintenance action is to be taken. While some are at 'Warning' others are at 'Alarm'. The details with suggested maintenance actions are attached with this report. Regular monitoring would enhance reliability.

### Acknowledgement: -

Tempsens acknowledges with gratitude the help and support provided by Mr. JITENDRA VERMA and his team without which the objectives of the project would have remained unfulfilled. Tempsens also thank the AMBUJA CEMENT PLANT

Sr. No.	Equipment	Max. Temp (°C)	Status	Image No.	Report No.
<b>A</b>	<b>WATER TREATMENT PLANT</b>				
<b>a</b>	<b>COOLING WATER FAN B</b>				
<b>1</b>	<b>COOLING WATER FAN B</b>	<b>92.7</b>	<b>Critical</b>	<b>35</b>	<b>01</b>
<b>2</b>	<b>COOLING WATER FAN B</b>	<b>80.0</b>	<b>Critical</b>	<b>36</b>	<b>02</b>
<b>B</b>	<b>PREHEATER</b>				
<b>A</b>	<b>D.C.CHOKE</b>				
<b>3</b>	<b>PUSHNG TERMINAL</b>	<b>127.4</b>	<b>Critical</b>	<b>37</b>	<b>03</b>
<b>4</b>	<b>PUSHNG TERMINAL</b>	<b>125.8</b>	<b>Critical</b>	<b>38</b>	<b>04</b>
<b>C</b>	<b>PRE HEATER MCC</b>				
<b>a</b>	<b>ROTTER PANEL</b>				
<b>5</b>	<b>ROTTER PANEL</b>	<b>65.1</b>	<b>Semi Critical</b>	<b>39</b>	<b>05</b>
<b>6</b>	<b>ROTTER PANEL</b>	<b>75.4</b>	<b>Critical</b>	<b>40</b>	<b>06</b>
<b>b</b>	<b>KRAMER PANEL</b>				
<b>7</b>	<b>ISOLATOR OF R</b>	<b>72.3</b>	<b>Semi Critical</b>	<b>41</b>	<b>07</b>
<b>D</b>	<b>KILN</b>				
<b>a</b>	<b>KILN TRANSFARMER</b>				
<b>8</b>	<b>KILN TRANSFARMER</b>	<b>66.9</b>	<b>Semi Critical</b>	<b>42</b>	<b>08</b>
<b>E</b>	<b>COOLER MCC</b>				
<b>a</b>	<b>MCC 42</b>				
<b>9</b>	<b>MCC INCOMER</b>	<b>70.8</b>	<b>Semi Critical</b>	<b>43</b>	<b>09</b>
<b>10</b>	<b>MCC INCOMER</b>	<b>65.5</b>	<b>Semi Critical</b>	<b>44</b>	<b>10</b>
<b>b</b>	<b>MCC 33</b>				
<b>11</b>	<b>MCC INCOMER</b>	<b>80.2</b>	<b>Critical</b>	<b>45</b>	<b>11</b>
<b>c</b>	<b>MCC 24</b>				
<b>12</b>	<b>MCC INCOMER</b>	<b>76.4</b>	<b>Semi Critical</b>	<b>46</b>	<b>12</b>
<b>d</b>	<b>MCC 24</b>				
<b>13</b>	<b>L1M 196</b>	<b>68.9</b>	<b>Semi Critical</b>	<b>47</b>	<b>13</b>
<b>14</b>	<b>L1M 108</b>	<b>96.8</b>	<b>Critical</b>	<b>48</b>	<b>14</b>
<b>e</b>	<b>MCC 33</b>				
<b>15</b>	<b>L1M 106</b>	<b>72.6</b>	<b>Semi Critical</b>	<b>49</b>	<b>15</b>
<b>F</b>	<b>COOLER MCC VVF ROOM</b>				
<b>a</b>	<b>L1M 112</b>				
<b>16</b>	<b>L1M 112</b>	<b>74.9</b>	<b>Semi Critical</b>	<b>50</b>	<b>16</b>
<b>b</b>	<b>L1M 110</b>				
<b>17</b>	<b>L1M 110</b>	<b>69.5</b>	<b>Semi Critical</b>	<b>51</b>	<b>17</b>
<b>c</b>	<b>L1M 125</b>				
<b>18</b>	<b>L1M 125</b>	<b>91.0</b>	<b>Critical</b>	<b>52</b>	<b>18</b>
<b>G</b>	<b>COMPRESSOR HOUSE 1</b>				
<b>a</b>	<b>MCC23</b>				
<b>19</b>	<b>K1M 182</b>	<b>62.6</b>	<b>Semi Critical</b>	<b>53</b>	<b>19</b>

b	MCC 31				
20	L1M 191	80.9	Critical	54	20
c	USS- 2				
21	PCC – 3	102.6	Critical	55	21
d	USS 1				
22	PCC 1	88.4	Critical	56	22
e	FIELD J.B.				
23	E1M 120	117.3	Critical	58	24
24	L1M 196	91.1	Critical	60	26
f	MOTOR T.B.				
25	L1M 196	94.0	Critical	59	25
H	ROW MILL				
a	MAINDRIVE				
26	SLIPRING TERMINAL	89.0	Critical	57	23
I	CEMENT MILL				
a	MCC 61				
27	MCC 61 INCOMER	61.5	Semi Critical	61	27
J	COMPRESSOR HOUSE – 2				
a	MCC 62				
28	MCC 62 INCOMER	70.5	Semi Critical	62	28
29	N2M 159 (FEEDER)	80.8	Critical	63	29
b	MCC 54				
30	MCC 54 INCOMER	66.9	Semi Critical	64	30
c	MOTOR HOUSE				
31	AIR COMPRESSOR (K 1003 B FEEDER)	81.3	Critical	65	31
32	K-1003C (MOTOR TERMINAL)	109.4	Critical	66	32
33	N1M – 159 (M.T.B.)	125.0	Critical	67	33
34	N2M – 159 (M.T.B.)	70.3	Semi Critical	68	34
H	O-SEPA ROOM				
a	N1M 306 PANEL				
35	N1M 306	140.7	Critical	69	35
I	USS-3				
a	PCC 6				
36	MANAV COLONY FEEDER	61.0	Semi Critical	70	36
J	CEMENT MILL MCC				
a	PFIC CONTROL PANEL				
37	PFIC CONTROL PANEL	76.5	Semi Critical	71	37
K	COMPRESSOR HOUSE 1				
a	E1M 120				
38	FIELD J.B.	101.7	Critical	72	38
39	FIELD J.B.	96.3	Critical	73	39
L	MAAN D.G.				
a	L.T. RAW WATER PUMP				
40	L.T. RAW WATER PUMP	60.6	Semi Critical	74	40

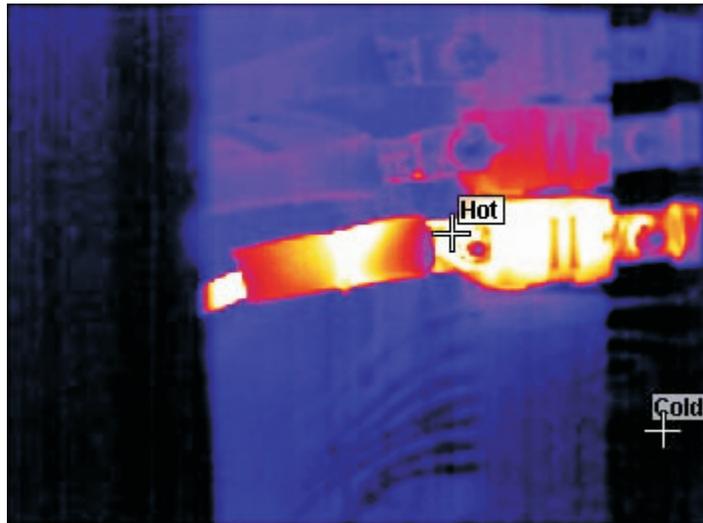
<b>b</b>	<b>HT RAW WATER PUMP</b>				
<b>41</b>	<b>HT RAW WATER PUMP</b>	<b>67.7</b>	<b>Semi Critical</b>	<b>75</b>	<b>41</b>
<b>c</b>	<b>MCC</b>				
<b>42</b>	<b>INCOMER</b>	<b>60.0</b>	<b>Semi Critical</b>	<b>76</b>	<b>42</b>
<b>43</b>	<b>LT COOLONG MOTOR</b>	<b>124.1</b>	<b>Critical</b>	<b>77</b>	<b>43</b>
<b>44</b>	<b>MAIN INCOMER</b>	<b>60.5</b>	<b>Semi Critical</b>	<b>78</b>	<b>44</b>
<b>M</b>	<b>THERMAL POWER PLANT</b>				
<b>a</b>	<b>BOILER MCC</b>				
<b>45</b>	<b>PA FAN 1</b>	<b>75.8</b>	<b>Critical</b>	<b>79</b>	<b>45</b>
<b>b</b>	<b>STG MCC</b>				
<b>46</b>	<b>CEP</b>	<b>66.1</b>	<b>Semi Critical</b>	<b>80</b>	<b>46</b>
<b>c</b>	<b>F.D FEEDER</b>				
<b>47</b>	<b>F.D. MOTOR</b>	<b>90.9</b>	<b>Critical</b>	<b>81</b>	<b>47</b>
<b>d</b>	<b>I.D. FAN</b>				
<b>48</b>	<b>I.D. FAN</b>	<b>71.5</b>	<b>Semi Critical</b>	<b>82</b>	<b>48</b>
<b>49</b>	<b>I.D. FAN</b>	<b>98.1</b>	<b>Critical</b>	<b>85</b>	<b>51</b>
<b>e</b>	<b>F.D. FAN</b>				
<b>50</b>	<b>F.D. FAN</b>	<b>101.9</b>	<b>Critical</b>	<b>83</b>	<b>49</b>
<b>51</b>	<b>F.D. FAN</b>	<b>69.8</b>	<b>Semi Critical</b>	<b>84</b>	<b>50</b>
<b>N</b>	<b>COLONY SUB STATION</b>				
<b>a</b>	<b>GUEST HOUSE LDB 1</b>				
<b>52</b>	<b>GUEST HOUSE LDB 1</b>	<b>65.9</b>	<b>Semi Critical</b>	<b>86</b>	<b>52</b>
<b>b</b>	<b>INCOMING FROM MAIN DB F1/1</b>				
<b>53</b>	<b>INCOMING FROM MAIN DB F1/1</b>	<b>68.9</b>	<b>Semi Critical</b>	<b>87</b>	<b>53</b>
<b>O</b>	<b>ATER TREATMENT PLANT</b>				
<b>a</b>	<b>PW 1004 C</b>				
<b>54</b>	<b>PW 1004 C</b>	<b>64.3</b>	<b>Semi Critical</b>	<b>88</b>	<b>54</b>
<b>b</b>	<b>PW 1004 A</b>				
<b>55</b>	<b>PW 1004 A</b>	<b>81.7</b>	<b>Critical</b>	<b>89</b>	<b>55</b>
<b>P</b>	<b>UTILITY</b>				
<b>a</b>	<b>CENTRE AC UNIT</b>				
<b>56</b>	<b>FEEDER TERMINAL COMPRESSOR NO.1</b>	<b>104.9</b>	<b>Critical</b>	<b>90</b>	<b>56</b>
<b>Q</b>	<b>CRUSHER</b>				
<b>a</b>	<b>FILTER FAN(A1FA01)</b>				
<b>57</b>	<b>FILTER FAN(A1FA01)</b>	<b>131.2</b>	<b>Critical</b>	<b>94</b>	<b>57</b>

## THERMOGRAPHY REPORT-02

**MAIN LOCATION:- WATER TREATMENT PLANT**

**AMBIENT TEMP. :- 35°C**

Location	Equipment	Date	Max.	Min	Diff.	Avg.
COLLING WATER FAN B	COLLING WATER FAN B	09.06.08	80.0	34.1	45.9	39.0



**OBJECTIVE:- FEEDER TO O/G TERMINAL YØ**

**BASIC OBSERVATION: - FEEDER TO O/G TERMINAL YØ is over heated.**

**ANALYSIS & RECOMMENDATION:- FEEDER TO O/G TERMINAL YØ temp. is very high it should be attended immediately as per the severity.**

**CLIENT ANALYSIS BY: ALPESH**

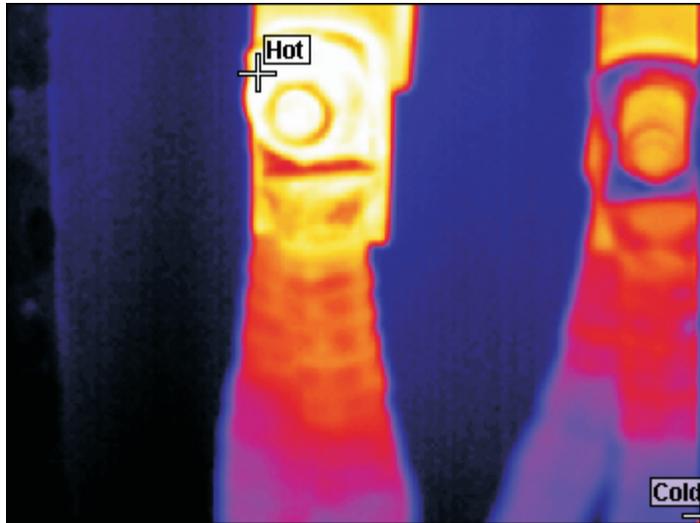
**CLIENT REPRESENTATIVE:**

## THERMOGRAPHY REPORT-03

**MAIN LOCATION:- PREHEATER**

**AMBIENT TEMP. :- 35°C**

Location	Equipment	Date	Max.	Min	Diff.	Avg.
D.C.CHOKE	PUSHNG TERMINAL	09.06.08	127.4	46.6	80.8	68.5



**OBJECTIVE:- NEGATIVE**

**BASIC OBSERVATION:- NEGATIVE** cable joint is over heated.

**ANALYSIS & RECOMMENDATION:- NEGATIVE** temp. is very high **it should be attended immediately as per the severity.**

**CLIENT ANALYSIS BY: ALPESH**

**CLIENT REPRESENTATIVE:**