



**MINUTES OF MEETING BETWEEN MAHANADI COALFIELDS LIMITED (MCL), SAMLESHWARI OCP AND ABHITECH ENERGYCON LTD (AEL) FOR THERMOL-D PERFORMANCE EVALUATION REPORT**

Dated: 08/03/2021

Reference: PO No. F57/B-75/470020532089		Dated: 12.03.2020
Equipment	Without Thermol-D	With Thermol-D
Drill-6021116 (RECP-650)	June-19 to Dec-19	June-20 to Dec-20
Drill-6021117 (RECP-650)	June-19 to Dec-19	June-20 to Dec-20
Shovel-10008 (BEM-1600)	June-19 to Dec-19	June-20 to Dec-20
Shovel-16079 (BEML-300)	June-19 to Dec-19	June-20 to Dec-20
Dozer-103357 (CUMMINS)	June-19 to Dec-19	June-20 to Dec-20
Dumper-3380 (BEML)	June-19 to Dec-19	June-20 to Dec-20
Dumper-3323 (BEML)	June-19 to Dec-19	June-20 to Dec-20
Dumper-10132 (BEML)	June-19 to Dec-19	June-20 to Dec-20
Escort Hydra-690	June-19 to Dec-19	June-20 to Dec-20

**Basis of Evaluation:**

To qualify the diesel saving with the usage of THERMOL-D, as per following methods:

**Calculation of Specific fuel Consumption & Performance Evaluation:**

$$SFC = \frac{\text{Total Diesel Consumption}}{\text{Total Running Hours}}$$

The Saving (%) will be calculated as per the given formula:-

$$\text{Saving \%} = \frac{SFC_{Pre} - SFC_{Post}}{SFC_{Pre}} \times 100$$

Where,  
 SFC<sub>Pre</sub> - Specific Fuel Consumption Without Thermol-D  
 SFC<sub>Post</sub> - Specific Fuel Consumption With Thermol-D

**Effect of Thermol-D on Key Parameteres:**

- ◆ Reduction in Specific Fuel Consumption (SPFC)

THERMOL-D Final Report Minutes Of Meeting (MOM)

*[Signature]*  
 Dy. Mgt (EXCV.)  
 SOCP

*[Signature]*  
 Dy. Mgt (EXCV.)  
 SOCP

*[Signature]*  
 9/3/21

Dy. Manager (Engg)  
 Samleshwari OCP,  
 Ib Valley Area, MCL



### Data Collection

- THERMOL-D added in the ratio of 1:2000 on v/v basis.
- The same set of parameters has recorded during the Pre and post- Trial.
- HMR data were taken from the individual equipment's on daily basis.
- All the Data were authenticated by the section engineer.
- Enclosed:  
Annexure I – Pre & Post trial report

**Comparison Report:** Specific Fuel consumption (Liter per hour) comparison is given below:

Summary of Thermol-D Trial, M/s Mahanadi CoalFields Limited, Samleshwari OCP (Odisha), Thermol-D Trial Conducted by : M/s Abhitech Energycon Limited, Mumbai						
Sr No.	Equipment	Trial Base	Total HSD Consumed [Liter]	Total Run [Hour]	Liter/Hour	HSD Saving (%)
1	Drill-6021116 (RECP-650)	Pre	11720.00	318.00	36.86	9.63%
		Post	6295.00	189.00	33.31	
2	Drill-6021117 (RECP-650)	Pre	15560.00	459.50	33.86	4.74%
		Post	10290.00	319.00	32.26	
3	Shovel-10008 (BEM-1600)	Pre	71630.00	820.00	87.35	4.42%
		Post	43165.00	517.00	83.49	
4	Shovel-16079 (BEM-300)	Pre	42269.00	1677.50	25.20	8.07%
		Post	29986.00	1294.50	23.16	
5	Dozer-103357 (CUMMINS)	Pre	11446.00	349.00	32.80	9.92%
		Post	11788.00	399.00	29.54	
6	Dumper-3380 (BEM)	Pre	28163.00	968.00	29.09	7.49%
		Post	9636.00	358.00	26.92	
7	Dumper-3323 (BEM)	Pre	9112.00	332.00	27.45	5.69%
		Post	8619.00	333.00	25.88	
8	Dumper-10132 (BEM)	Pre	49056.00	1284.0	38.21	9.17%
		Post	18046.00	520.00	34.70	
9	Escort Hydra-690	Pre	529.00	127.0	4.17	7.09%
		Post	654.00	169.00	3.87	

*[Signature]*  
20/5/21

*[Signature]*  
Dy. Mgr (EXCV.)  
SOCP

*[Signature]*  
9/3/21  
Dy. Manager (ExcV)  
Samleshwari O.C.P.  
Id Valley Area, M.C.L.

*[Signature]*  
8/3/21  
ABHITECH ENERGYCON LIMITED  
MUMBAI

Particulars	Unit	Drill-6021116 (RECP-650)	Drill-6021117 (RECP-650)	Shovel-10008 (BE-1600)	Shovel-16079 (BE-300)	Dozer-103357 (CUMMINS)	Dumper-3380 (BEML)	Dumper-3323 (BEML)	Dumper-10132 (BEML)	Escort Hydra-690
Average Specific Fuel Cons. Without Thermol-D	Ltr/hr	36.86	33.86	87.35	25.20	32.80	29.09	27.45	38.21	4.17
Average Specific Fuel Cons. With Thermol-D	Ltr/hr	33.31	32.26	83.49	23.16	29.54	26.92	25.88	34.70	3.87
Saving in Fuel Consumption	Ltr/hr	3.55	1.61	3.86	2.03	3.25	2.18	1.56	3.50	0.30
Hours operated with addition of Thermol-D	Hour	189.00	319.00	517.00	1294.50	399.00	358.00	333.00	520.00	169.00
Total HSD Saving	Liter	670.66	512.26	1996.84	2632.31	1297.83	779.65	520.45	1820.92	49.94
Cost of HSD saved (Rs 74.36/- Liter)	Rs	49870.31	38091.90	148485.13	195738.81	96506.50	57975.14	38700.95	135403.31	3713.90
Total Fuel consumption with Thermol-D	Liter	6295.00	10290.00	43165.00	29986.00	11788.00	9636.00	8619.00	18046.00	654.00
Total Thermol-D added (1:2000 v/v)	Liter	3.1475	5.145	21.5825	14.993	5.894	4.818	4.3095	9.023	0.327
Cost of Thermol-D (Rs 1600/- per Liter)	Rs	5036	8232	34532	23988.80	9430.40	7708.80	6895.20	14436.80	523.20
<b>Total Saving (In Rs)</b>	<b>Rs</b>	<b>44834.31</b>	<b>29859.90</b>	<b>113953.13</b>	<b>171750.01</b>	<b>87076.10</b>	<b>50266.34</b>	<b>31805.15</b>	<b>120966.51</b>	<b>3190.70</b>
<b>Total saving / Operating Hour</b>	<b>Rs/hr</b>	<b>237.22</b>	<b>93.60</b>	<b>220.41</b>	<b>132.68</b>	<b>218.24</b>	<b>140.41</b>	<b>95.51</b>	<b>232.63</b>	<b>18.88</b>

For, MAHANADI COALFIELDS LTD.

For, ABHITECH ENERGYCON LTD.

1. Mr. A. Chakraborty - S.O.(Excav) Samleshwari Area
2. Mr. Y. N. Senapati - P.E.(Excav) Samleshwari OCP
3. Mr. R. K. Kalo - Dy. Manager Wrkshop Incharge Samleshwari OCP
4. Mr. Alok Kumar - Dy. Manager
5. Mr. C.K. Srivastav - Dy. Manager

Handwritten signatures and stamps for Mr. A. Chakraborty, Mr. Y. N. Senapati, and Mr. R. K. Kalo. Includes a circular stamp for ABHITECH ENERGYCON LIMITED, MUMBAI, dated 21/3/21.

1. Mr. Durgvijay Bharti - Manager
2. Mr. Ramchandra Sahani - Sr. Exe. Tech.

Dy. Manager (Excav)  
Samleshwari O.C.P.  
Ib Valley Area, M.C.L.