TRIAL

CONDUCTED

AT

M/s. Hindustan Coca-Cola Beverages Private Limited.,

Palakkad, Kerala.

USING

TLC EXOIL – 4000,
MULTIFUNCTIONAL FUEL CONDITIONER

REPORT PREPARED BY

M/s. UNITED ONE PVT. LTD.
(PETROCHEMICAL DIVISION)
T.NAGAR, CHENNAI – 600 017.

UNITED ONE PVT. LTD.

UOPL/ MKTG / A 22 / 03
15th February, 2003.

To
M/s. Hinduatan Coca Cola Beverages Pvt Limited,
Moolathara Village,
Kannimari P.O, Chittur Taluk,
Palakkad – 678 534.

Kind Attn: Mr. Venkat G. Sridhar, Executive Maintenance.

Dear Sirs,
Sub: BOILER TRIAL REPORT with Multifunctional Fuel Conditioner.
(TLC Exoil – 4000)

We thank you for the kind co-operation extended to us when we had demonstrated the use and utility of our TLC Exoil – 4000, Multifunctional Fuel Conditioner in your Boiler Plant at Palakkad.

TLC Exoil – 4000, Multifunctional Fuel Conditioner is an "approved product for pollution control by the Environmental Protection Agency, USA and the products imported from USA, AUSTRALIA and SINGAPORE".

We are pleased to enclose herewith a detailed trial report for your kind perusal & necessary action.

The overall, observations/benefits as obtained by the use of our TLC Exoil -4000 Multifunctional Fuel Conditioner at the Boiler plant are as under:

Fuel savings obtained by using our product is 10% in 3TPH Shellmax Boiler

During the trial run the data's were obtained by using the latest German Make Flue Gas Analyzer TESTO-305 and KM 900 (UK) instrument.

Astonishing benefits of "TLC Exoil 4000" for 3TPH Shellmax Boiler

- Reduces the amount of soot and unburnt hydrocarbon & particulate emissions like CO, SO_2, SO_3 and NO_x in the flue gas around 85%.
- Improves complete combustion/heat transfer/higher flame temperature and maximum heat recovery from the fuel.
- Prevention of clinker formation and lowering corrosion rate in heat transfer surfaces and chimney.
- Savings in maintenance costs due to less fouling and trouble free operation.
- Improved working condition for boiler operators due to less thermal and gaseous pollution.
- It is an anti-pollutant and energy saving product. As a consequence, reduction in fuel consumption between 5-12%.

Our TLC Exoil -4000, Multifunctional Fuel Conditioner not only saves your organization money but also solves much of your emission problem acting as pollution control catalyst.

Since the savings & other benefits are substantial we strongly recommend the use of our TLC Exoil 4000 - Multifunctional Fuel Conditioner on a regular basis to reap tangible & intangible benefits.

We will be servicing you periodically on all technical aspects.

Thanking you and assuring you of our best attention at all times. We remain...

Sincerely Yours,
For United One Pvt. Ltd.

Jitin Patnaik
Manager – Sales & Marketing

TRIAL METHOD

TLC EXOIL - 4000

MULTI FUNCTIONAL FUEL CONDITIONER

AT
M/s. HINDUSTAN COCA - COLA BEVERAGES PRIVATE LIMITED
PALAKKAD, KERALA.

1.0 ACKNOWLEDGEMENT

TLC Exoil 4000 – Multifunctional Fuel Conditioner Trials Report of M/s. Hindustan Coca – Cola Beverages Pvt Ltd.

ACKNOWLEDGEMENT

We at **UNITED ONE,** would like to extend our whole hearted thanks to the management of **M/s. Hindustan Coca – Cola Beverages Pvt. Ltd., Palakkad**for providing us an opportunity to demonstrate our product **TLC Exoil 4000 - Multifunctional Fuel Conditioner** at your Boiler Plant.

We thank **Mr. Venkat G. Sridhar , Executive- Maintenance** for his initiative in taking up the trial. We would also thank the Boiler Operators and Helpers for their keen attendance while conducting the trials.

We would like to place on record our thanks to all those who directly and indirectly involved in successfully conducting the trial run.

2.0 UNITED ONE

(ENERGY CONSERVATION CELL)

UNITED ONE – ENERGY CONSERVATION CELL (PETROCHEMICAL DIVISION)

The principle aim of our **PETROCHEMICAL DIVISION** is not only to market TLC Exoil - 4000 Multifunctional Fuel Conditioner but also provide technical backup to all types of D.G.Sets, Boilers, Thermic Fluid Heaters, Furnaces and Marine Vessels so as to increase the efficiency and performance while reducing the harmful emissions which are polluting our environment.

The State-of-the-art Fuel Conditioning Technology – Transplanted to Indian fuel conditions to upgrade the various performance enhancement in fuels like Gasoline (Petrol), Diesel, LDO, HSD, Naphtha, SKO, LSHS and Heavy Fuel Oil (HFO).

TLC Exoil 4000, Multifunctional Fuel Conditioner is well proven in world-wide and several industries in Asia.

- Reduces the amount of soot and unburnt hydrocarbon & particulate emissions likeCO, SO_2, SO_3 and NO_x in the flue gas around 85%.
- Improves complete combustion/heat transfer/higher flame temperature and maximum heat recovery from the fuel.
- Prevention of clinker formation and lowering corrosion rate in heat transfer surfaces and chimney.
- Savings in maintenance costs due to less fouling and trouble free operation.
- Improved working condition for boiler operators due to less thermal and gaseous pollution.
- It is an anti-pollutant and energy saving product. As a consequence, reduction in fuel consumption between 5-12%.

Our **PETROCHEMICAL DIVISION** – Conducts various energy conservation trials to improve the efficiency in Boilers, Thermic Fluid Heaters, Furnaces, D.G.Sets and Marine Vessels.

In addition to the above we also offer free monthly Flue Gas Loss Optimization service using the latest German Make Flue Gas Analyzer TESTO-305 and UK Make KM 900 renders energy conservation and emission control tips from a team of well-experienced professionals.

3.0 BOILER SPECIFICATION

UNITED ONE PVT. LTD.

RECOMMENDED DOSAGE–TLC EXOIL 4000

Product Used	: TLC Exoil 4000-Multifunctional Fuel Conditioner (For Fuel & Energy Conservation)
Dosage	: 1 Ltr of Fuel Conditioner for every 4000 Ltrs of Furnace Oil.
Objective	: Fuel & Energy Conservation and Pollution Control.

BOILER 1 SPECIFICATION – 3TPH

Make	: SHELLMAX (THERMAX LTD)
Type	: 3-Pass Smoke Tube Boiler.
Year of Make	: 1999
Model	: SM – 30 A / 10.54 / 34
Capacity	: 3 TPH
Fuel	: Furnace Oil
Evaporation	: 3000 Kgs/Hr
Boiler working pressure	: 10.54 Kg/Cm^2

BOILER 2 SPECIFICATION – 3TPH

Make	: SHELLMAX (THERMAX LTD)
Type	: 3-Pass Smoke Tube Boiler.
Year of Make	: 1999
Model	: SM – 30 A / 10.54 / 34
Capacity	: 3 TPH
Fuel	: Furnace Oil
Evaporation	: 3000 Kgs/Hr
Boiler working pressure	: 10.54 Kg/Cm^2
Main Storage Tank Capacity	**: 40, 000 Ltrs (1No)**
Service Oil Tank Capacity	**: 2120 Ltrs**

4.0 PROCEDURE OF TRIALS

PROCEDURE OF TRIAL

PRE – CONDITIONER:

DAY – 1 **DATE: 31/01/2003 9.30 AM**

- Visited the boiler plant, took specification of boiler, FO fuel storage facility, feed water tank etc.
- Collected the details of present operating parameters of boilers, i.e., FO consumption / shift, water consumption etc.
- Checked flue gas parameters as enclosed.

DAY – 2 **DATE: 01/02/2003 9.30AM**

Collected the complete Boiler operating parameters and flue gas analysis report in

Low Fire at 10.30 am as enclosed.

DAY – 3 **DATE: 03/02/2003 9.30 AM**

- The boiler was operating at Low Fire. The flue gas analysis report is enclosed.

- Received FO of 10 KL and the earlier stock was 11KL..The total fuel of 21 KL(11KL+10KL=21 KL) was treated at a ratio of 1:2 KL ie., 12 Ltrs of fuel conditioner and gave circulation for homogeneous mixing and reduction of viscosity.

DAY – 4 **DATE: 04/02/2003 9.30 AM**

Again the circulation continued from 10.30am onwards till 12 pm and from 3.30 pm to 4.20 pm. Reading taken in flue gases:

POST – CONDITIONER:

DAY – 5 **DATE: 05/02/2003**

- Circulation for FO was given 2 hours in the morning 10 am to 12 noon and evening 2 to 4 pm ie., 2 hours for proper blending. The load connected to the boiler was 60% and S/F was increased from 9.7 to 10.3. Flue gas analysis was taken as per the report.

5.0 FUEL CONSERVATION REPORT

UNITED ONE PVT. LTD.

FUEL CONSERVATION REPORT – (ECONOMICS)

Pre – Conditioner Steam to Fuel Ratio = 9.00 Kgs/Ltr

Post – Conditioner Steam to Fuel Ratio = 9.90 Kgs/Ltr

$$\text{Percentage Improvement} = \frac{\text{Post Conditioner} - \text{Pre Conditioner}}{\text{Pre Conditioner}}$$

$$= (9.90 - 9.00) / 9.00 \times 100$$

$$= 10.00\%$$

BOILER AVERAGE FUEL SAVINGS = 10 %

FUEL ECONOMY ANALYSIS:

Average monthly FO consumption	= 50 KL
FO savings realized	= 10 %
FO Saved per month	= 5 KL
Cost of FO saved	= Rs. 75000 /- -------- (A)
Fuel Conditioner used per month	= 12.5 Ltrs
Cost of TLC Exoil -4000 / Ltr	= Rs. 950/-
Cost of Fuel Conditioner used per month	= Rs. 11, 875 /- ---------(B)
A – B	= Rs. 75000 – Rs.11, 875
Net Monthly Savings	= Rs. 63,125/-

NET ANNUAL SAVINGS = Rs. 7,57,500 /-

As the saving is substantial, it is recommended to use the Fuel Conditioner continuously on a regular basis to achieve the benefits.

Apart from the above benefits the usage of Fuel Conditioner will help to reduce the environmental problems by reducing the soot and carbon particulate emission like CO, SO_2, SO_3 and NO_x in the flue gas.

6.0 BOILER THERMAL EFFICIENCY

BOILER THERMAL EFFICIENCY

Boiler Thermal Efficiency = 100 – Total Losses

Total Losses = Stack Loss + Blow Down Loss + Radiation Loss + Hydrogen Loss

Hydrogen Loss = 7%
Blow Down Loss & Radiation Loss = 2%

Stack Loss: $(K \times \Delta T) / \%$ of $CO_2 \times 100\%$ $(K = 0.576)$

ΔT = Stack temp. – Ambient Temp. $(T_{st} - T_{at})$

SHELLMAX BOILER - 3TPH

PRE-CONDITIONER DATA without TLC Exoil 4000(At HIGH FIRE)

O_2 % = 6.8

CO_2 % = 15.5/20.9 × (20.9 - % of O_2)
= 15.5/20.9 × (20.9 – 6.8)
= 15.5/20.9 × 14.1
= 10.45 %

Stack Loss = K × (Tst – Tat) / % of CO_2
= 0.576 × (236-32) / 10.45
= 0.576 × 204 / 10.45
= 11.24

Total Losses = 11.24+2+7= 20.24

Boiler Thermal Efficiency = 100 – Total Losses

= 100 – 20.24

=79.76

η % = 79.76%

POST-CONDITIONER DATA with TLC Exoil 4000 (High Fire)

O_2 % = 1.6

CO_2 % = 15.5/20.9 × (20.9 - % of O_2)
= 15.5/20.9 × (20.9 – 1.6)
= 15.5/20.9 × 19.3
= 14.31

Stack Loss = K × ($T_{st} - T_{at}$) / % of CO_2
= 0.576 × (177-32) / 14.31
= 0.576 × 145 / 14.31
= 5.83

Total Losses = 5.83+2+7= 14.83

Boiler Thermal Efficiency = 100 – Total Losses

= 100 – 14.83

η % = 85.17%

$$\text{Percentage Improvement} = \frac{\text{Post Conditioner} - \text{Pre Conditioner}}{\text{Pre Conditioner}} \times 100$$

= (85.17 – 79.76 / 79.76 × 100

=6.78

Boiler Thermal Efficiency Improved after using TLC Exoil-4000 by 6.78 %

Overall Observation:

As the saving is substantial it is recommended to treat the fuel from the main storage tank of furnace oil.

Let's join together to stop pollution,
save environment and

save fuel oil ...

7.0 PRE – POST CONDITIONER DATA

M/s. Hindustan Coca Cola Beverages Pvt. Ltd.
Moolathara Village, Palakkad - 678 534, Kerala.

BOILER FUEL & ENERGY CONSERVATION AUDIT

PRE CONDITIONER DATA

Boiler : SHELLMAX - 3 TPH

Date : 31.1.03

Time	FO Temp °C	Furnace Oil Pressure Kgs/Cm_2		Feed Water Temp °C	Steam Totalizer Kgs/Hr	Steam Consumed Kgs/Hr	FO Totalizer Kgs/Hr	FO Consumed Kgs/Hr	S/F Ratio	Flue Gas Analysis							
		Inlet	Outlet							Fire Load	O_2 %	CO_2 %	SO_2 PPM	CO PPM	Ambient Temp °C	Stack Temp °C	Comb. Eff. %
11-00	123	23	5	75	9854.55	-	4839	-	-	L.F	6.7	10.8	1116	8	32.4	188	92.9
12-00	120	27	8	75	9855.38	830	4935	89.28	9.29								
13-00	118	28	12	75	9856.37	990	5043	100.44	9.85	H.F	5.1	11.71	1320	8	33.0	214	93.5
14-00	121	22	5	75	9857.12	750	5135	85.56	8.76								
15-00	118	24	5	75	9858.12	1000	4247	104.16	9.60								
16-00	118	24	5	75	9859.21	1091	5372	116.25	9.38								

Supervised by:
M/s. Hindustan Coca Cola Beverages Pvt. Ltd.

Mr.P.K.Ravi / Mr.Babu Mathew / Mr.M.Suresh Babu
BOILER OPERATORS

Trial Conducted by:
M/s. United One Pvt. Ltd.

Jitin Patnaik / Jaiprakash Natarajan
Manager - Sales & Marketing

M/s. Hindustan Coca Cola Beverages Pvt. Ltd.
Moolathara Village, Palakkad - 678 534, Kerala.

BOILER FUEL & ENERGY CONSERVATION AUDIT

PRE CONDITIONER DATA

Boiler : SHELLMAX - 3 TPH

Date : 01.02.03

Time	FO Temp °C	Furnace Oil Pressure Kgs/Cm_2		Feed Water Temp °C	Steam Totalizer Kgs/Hr	Steam Consumed Kgs/Hr	FO Totalizer Kgs/Hr	FO Consumed Kgs/Hr	S/F Ratio	Flue Gas Analysis							
		Inlet	Outlet							Fire Load	O_2 %	CO_2 %	SO_2 PPM	CO PPM	Ambient Temp °C	Stack Temp °C	Comb. Eff. %
10-30	116	28	5	75	9877.90	-	7478	-	-	L.F	6.5	10.9	1100	8	31.1	191	92.5
11-30	118	30	8	75	9878.64	740	7603	116.25	6.36								
14.00	118	32	12	75	9879.30	-	7997	-	-								
15.00	121	27	11	75	9880.27	970	8121	115.32	8.41								
16.00	121	23	5	75	9881.44	1170	8250	119.97	9.75								
17.00	121	27	10	75	9882.48	1040	8369	110.67	9.39	HF	3.8	13.2	1365	5	34.8	206	94.5

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BOILER FUEL & ENERGY CONSERVATION AUDIT

PRE CONDITIONER DATA

Boiler : SHELLMAX - 3 TPH

Date : 3 - 02 - 03

Time	FO Temp °C	Furnace Oil Pressure Kgs/Cm_2		Feed Water Temp °C	Steam Totalizer Kgs/Hr	Steam Consumed Kgs/Hr	FO Totalizer Kgs/Hr	FO Consumed Kgs/Hr	S/F Ratio	Flue Gas Analysis							
		Inlet	Outlet							Fire Load	O_2 %	CO_2 %	SO_2 PPM	CO PPM	Ambient Temp °C	Stack Temp °C	Comb. Eff. %
10-00	118	22	4	75	9903.78	-	737	-	-	L.F							
11-00	118	23	5	75	9904.64	860	836	92.07	9.34	HF	2.5	13.9	1506	[redacted]17	31.1	186	92.8
12-00	122	22	5	75	9905.03	390	894	53.94	7.23	LF							
13-00	118	28	6	75	9906.38	1350	1040	135.78	9.94	HF							
14-00	117	24	6	75	9907.59	1210	1175	125.55	9.63	LF	6.8	10.45	1150	15	34	189	92
15-00	121	22	4	75	9908.52	930	1278	95.79	9.70	HF							
16-00	120	22	5	75	9909.21	690	1359	75.33	9.15	LF							

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Jitin Patnaik / Jaiprakash Natarajan
Manager - Sales & Marketing

M/s. Hindustan Coca Cola Beverages Pvt. Ltd.
Moolathara Village, Palakkad - 678 534, Kerala.

BOILER FUEL & ENERGY CONSERVATION AUDIT

POST CONDITIONER DATA

Boiler : SHELLMAX - 3 TPH
Dosage : 1 : 2000 LTRS.

Date : 4-02-03

Time	FO Temp °C	Furnace Oil Pressure Kgs/Cm$_2$		Feed Water Temp °C	Steam Totalizer Kgs/Hr	Steam Consumed Kgs/Hr	FO Totalizer Kgs/Hr	FO Consumed Kgs/Hr	S/F Ratio	Flue Gas Analysis							
		Inlet	Outlet							Fire Load	O_2 %	CO_2 %	SO_2 PPM	CO PPM	Ambient Temp °C	Stack Temp °C	Comb. Eff. %
1100	121	25	4	75	9929.35	-	3580	-	-	HF	1.6	14.8	1320	5	30.5	218	94.3
1200	119	25	5	75	9930.49	1140	3705	116.25	9.80	LF	6.8	10.45	1150	5	34	189	92.0
1300	117	23	5	75	9931.45	960	3816	103.23	9.29								
1400	121	23	5	75	9932.05	600	3892	70.68	8.48								
1500	120	31	8	75	9933.41	1360	4035	132.99	10.22								
1600	114	29	10	75	9934.86	1450	4164	119.97	12.08								

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Jitin Patnaik / Jaiprakash Natarajan
Manager - Sales & Marketing

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Moolathara Village, Palakkad - 678 534, Kerala.

BOILER FUEL & ENERGY CONSERVATION AUDIT

POST CONDITIONER DATA

Boiler : SHELLMAX - 3 TPH **Date : 05/02/03**
Dosage : 1 : 2000 LTS.

Time	FO Temp °C	Furnace Oil Pressure Kgs/Cm$_2$		Feed Water Temp °C	Steam Totalizer Kgs/Hr	Steam Consumed Kgs/Hr	FO Totalizer Kgs/Hr	FO Consumed Kgs/Hr	S/F Ratio	Flue Gas Analysis							
		Inlet	Outlet							Fire Load	O_2 %	CO_2 %	SO_2 PPM	CO PPM	Ambient Temp °C	Stack Temp °C	Comb. Eff. %
10.00	119	24	5	75	9952.69	-	6226	-	-								
11.00	118	24	5	75	9953.77	1080	6345	110-67	9.75	L.F	6.8	10.45	1150	5	32	180	92.0
12.00	117	32	7	75	9954.95	1180	6477	122-76	9.61								
13.00	119	28	7	75	9956.02	1070	6596	110.67	9.66	H.F	4.6	12.08	1320	5	30.2	220	91.5
14.00	117	25	4	75	9957.16	1140	6722	117.18	9.72								
15.00	118	25	4	75	9958.18	1020	6831	101.37	10.06								
16.00	119	25	5	75	9959.27	1090	6944	105.09	10.37								

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Mr.P.K.Ravi / Mr.Babu Mathew / Mr.M.Suresh Babu
B O I L E R O P E R A T O R S

Trial Conducted by:
M/s. United One Pvt. Ltd.

Jitin Patnaik / Jaiprakash Natarajan
Manager - Sales & Marketing

8.0 CERTIFIED DATA REPORT

SHELLMAX BOILER-3 TPH
PRE& POST CONDITIONER DATA (At low fire)

	PRE CONDITIONER DATA			POST CONDITIONER DATA	
PARAMETERS	3/2/03	1/2/03	31/1/03	4/2/03	5/2/03
OXYGEN(%)	6.8	6.5	6.7	6.8	6.8
CARBONDIOXIDE (%)	10.45	10.9	10.8	10.45	10.45
CARBONMONOXIDE (ppm)	15	8	8	5	5
SULPHUR DI OXIDE (ppm)	1150	1100	1116	1150	1150
COMBUSTION EFFICIENCY (%)	92	92.5	92.9	92	92
STACK TEMP. deg C	189	191	188	189	180
DOSAGE				← 1:2000Lts →	

UNITED ONE PVT. LTD.

SHELLMAX BOILER - 3 TPH

PRE& POST CONDITIONER DATA(At high fire)

	PRE CONDITIONER DATA			POST CONDITIONER DATA	
PARAMETERS	3/2/03	1/2/03	31/1/03	4/2/03	5/2/03
OXYGEN (%)	2.5	3.8	5.1	1.6	4.6
CARBONDIOXIDE (%)	13.9	13.2	11.71	14.8	12.08
CARBONMONOXIDE (ppm)	17	5	8	5	5
SULPHUR DI OXIDE (ppm)	1506	1365	1320	1320	1320
COMBUSTION EFFICIENCY (%)	92.8	94.5	93.5	94.5	91.5
STACK TEMP deg C	186	206	214	218	220
DOSAGE				← 1:2000Lts →	

Shellmax Boiler (3 TPH)
Flue gas Analysis Report (At High Fire)

TEST PARAMETERS	Pre Conditioner Data	Average	Post Conditioner Data	Average	Effect on test Parameter by addition of "TLC Exoil-4000" into the FO
OXYGEN (%)	6.8	6.8	1.6	4.5	reduced by 76.5%
CARBON DI OXIDE(%)	11.75-11.69	11.71	14.8-12.8	12.3	increased by 18%
CARBONMONOXIDE (ppm)	17-5	11	4.2-3.8	4	reduced by 54.5%
SULPHUR DI OXIDE (ppm)	1506-1500	1503	1320	1320	reduced by12.2%
COMBUSTION EFFICIENCY(%)	92.8	92.8	94.5	94.5	increased by 1.83%
STACK TEMP. (deg C)	236	236	177	177	reduced by 25%

UNITED ONE PVT. LTD.

9.0 FLUE GAS INSTRUMENT DETAILS

Kalibrier-Protokoll

Calibration protocol • Protocole d'étalonnage
Protocollo di calibrazione • Informe de calibración

Gerät / Module/ type / Type de modèle / Prodotto / Modelo: T30[illegible]-1
Seriennummer / Serial No. / No. de série / No. Serie strumento / n° de serie: 30500512

Temperaturmessung **Temperature measurement** **Mesure de température** **Misura della temperatura** **Medición de temperatura**	Sollwert Reference Référence Valore campione Referencia	Istwert Actual value Valeur effect. Valore misurato Valor medido	zulässige Abweichung Permissible deviation Différence admissible Scostamento ammesso Desviación permitida
Abgastemperatur / Flue gas temperature Termpérature des fumées Temperatura fumi Temperatura gases	4.0 °C	4.0 °C	+- 2.0 °C

ISO 9001 TESTO QUALITÄT Zertifiziert

Gasmeßwerte / Gas vaules / Valeurs de gaz mesurées / Parametri di misura dei gas / Gases patrón

Reg. Nr. Reg. No. Reg. No. Num.reg. n° certi	Gas Gas Gaz Gas Gas	Sollwert Reference Référence Valore campione Referencia	Istwert Actual value Valeur effective Valore misurato Valor medido	zulässige Abweichung Permissible deviation Différence admissible Scostamento ammesso Desviación permitida
A2840	O2	5.0 %	5.0 %	+- 0.3 %
A2840	CO	195 ppm	180 ppm	+- 55 ppm

Datum/Date/Date/Data/Fecha: 16.07.2002 **Prüfer/Inspector/Vérificateur/Verificatore/Verificador: 116**

10.0 CONCLUSION CERTIFICATE

CONCLUSION CERTIFICATE

We hereby state that by using our TLC Exoil-4000 Multi Functional Fuel Conditioner, your esteemed organisation achieves the following

- *Improves the Boiler Plant to Higher Efficiency*
- *Reduces the Amount of Soot and unburnt Hydrocarbons & Particulate Emissions like CO,SO_2, SO_3 and NO_X in the Flue Gas around 85%.*
- *Improves Complete Combustion/Heat Transfer/Higher Flame Temperature and maximum Heat Recovery from the Fuel Oil.*
- *Prevention of Clinker formation and lowering corrosion rate in Heat Transfer surfaces and Chimney.*
- *Improved working conditions for Boiler Operators due to less Thermal and Gaseous Pollution.*
- *It is an Anti-pollutant and energy saving product. As a consequence, reduction in Fuel Consumption around 10%.*