Telephone (033) 4450206/7, 4450701
Telefax (033) 4450215

NTE

Hermannsburg Factory
P/Bag X02
3258

CO-OPERATIVE LIMITED

(Registered under the Co-operative Act 1981)

To whom it may concern :

7 March 2005

Chinco Fireside Additive

As Industrial manager being overall in charge and responsible for the engineering as well as the production functions for both the Hermannsburg as well as the Iswepe factories of NTE Co-Operative Ltd, I herewith confirm my experience in using the Chinco Fireside treatment since its introduction in both our factories since 2002. The history as well as the results we obtained are listed below :

We initially started using the catalyst in our Dutch ovens as an experiment during December 2001. The spents/bagasse combustion is normally retarded due to the high moisture content which normally ranges between 58% and 60% moisture when being fired and used as fuel in the boilers and there has never been products available to improve both spents/bagasse as well as the more common coal-fired boilers. An Iron Oxide product was used by us but the results were found to be unsatisfactory and hence we stopped using the product during 2001.

Firewood is used as primary fuel to ignite and maintain the combustion of the spent bark. Since introducing Chinco we have achieved major savings in firewood useage due to the improved combustion created by the catalyst. Much less firewood is required to maintain the same level of combustion as before. We attach photos of the ash taken from our No. 2 boiler before and after starting treatment, to indicate the complete burnout of the bark after adding Chinco. (See Annexure 1) As can be seen in sample C1094, the carbon content is extremely high whilst that in sample C1088, the carbon content is almost nonexistant.

Due to an unfavourable experience with an imported iron oxide product which we initially used, we were initially reluctant to use Chinco on our Coal-fired boilers and dryer ovens. However, the test results with the safe manganese based product out-classed the results previously obtained with the iron oxide. Unburnt carbon in the ash was reduced dramatically after adding Chinco. This, obviously, left us with no other choice other than to use Chinco in all our boilers with amazing results.

After using Chinco for some time, the following observation was made :
The interior walls and combustion arch in the water-tube boilers had much less, and softer, carbon build-up. The bird nesting was also cured. This was obviously due to the tars and impurities in the coal being burnt up instead of evaporating and clinging to the metal surfaces.

Iron containing clinkers experienced before were also minimised as the local coals already contain a fairly high Fe and only trace elements of Mn.

The fire tubes of the dryer furnaces remained open and free of build-up for much longer periods without requiring constant flushing to clear them from choking up.

Although we are not in a built-up or residential area, we carry out regular emission visual spot checks. The opacity of the smokestack emission has improved greatly since using the product. Smoke emitted is now light grey instead of soot black.

Weekly fuel consumption checks are in place (reports are available) and there has been a major cost saving since using Chinco over the past three years.

The same successful Chinco boiler treatment is now used in our Iswepe factory boilers and we certainly recommend the use thereof in any coal or spents/bagasse fired boilers elsewhere.

The following is a short description of my resumé confirming my background and knowledge of boilers :

* Government certificates of competency as both mechanical and electrical engineer.

* Diploma in mechanical engineering.

* Inspector of machinery for the Free State based in Welkom, responsible for the inspection and testing of all boilers used on the mines and works from 1980 - 1988.

* Chief inspector of machinery for KwaZulu and Natal based in Dundee, responsible for the inspection and testing of all boilers used on the mines and works in Natal 1982-1988.

* Section Engineer Power Island Mondi Kraft Richards Bay 1991 - 1996.

* Industrial Manager NTE Hermannsburg 1996 to date.

* Registered as competant person for inspection of boilers.

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J H Klynsmith
Industrial Manager

MVC 008F

Annexure 1.

P.O. Box 82124,
Southdale, 2135,
South Africa.
TEL.: (011) 496-2228
FAX: (011) 496-2239

INSPECTORATE

Ref. No.: 02/3071M
Issued at: Durban
Date: 13/01/2003
Sheet: 1 of 1

INSPECTORATE M&L (PTY) LTD.

(Reg. No. 89/03084/07)
Consulting Industrial Chemists, Analysts & Samplers
CONFIDENTIAL

Certificate / Report

COMPANY NAME	:	CHINCO IMPORTS CC.
SUBJECT	:	Analysis of a Sample of Untreated Spents
	:	(Wood Bark) Ash
MARKED	:	Natal Tanning Extracts (Greytown)
INSTRUCTED BY	:	Mr. Tom Roberts
DATE RECEIVED	:	13/12/2002 & 10/01/03
LAB NO(S)	:	C974 & C1088

Analysis on Air Dried Basis:

RESULTS OBTAINED:

ANALYSIS	METHOD	RESULTS Before Treatment	RESULTS After Treatment
Moisture, %	*(C030-310)	3.1	0.3
Volatiles, %	*(C030-302)	12.7	9.0
Ash, %	*(C030-303)	14.6	91.1
Fixed Carbon, %	(By Difference)	69.6	-0.4
Total Sulphur, S %	*(030-309)	0.01	<0.01
Gross Calorific Value,mj/kg	*(030-307)	24.74	1.44

TOTAL CARBON, %

Total Carbon, C %		74.25	7.40

**TEST CARRIED OUT ON SPENTS [WOODBARK] FIRED WATERTUBE BOILER No 3 :
NATAL TANNING EXTRACTS CO-OPERATIVE LTD, HERMANSBURG.
ASH ANALASYS BEFORE & AFTER ADDING CHINCO FIRESIDE TREATMENT.**

Constable 4431

RESULTS REPORTED RELATE ONLY TO ITEMS TESTED

Authorised Signature (Original in blue ink)
Chief Chemist/Laboratory Manager

See Terms and Conditions overleaf