



LEXTRAN LTD.

Advanced Clean Air Solutions



HELPS YOU CLEAN THE AIR FOR A BETTER WORLD

Overview



- Lextran Ltd. is a private company formed in 1997 by Ludan Engineering Co. Ltd. one of Israel's leading engineering companies with 700 employees.
- Lextran has developed a unique and patented gas cleaning technology that removes pollutants from flue gasses emitted by power plants and other industrial installations.
 - * **Granted patents: EU # 1225967; US # 6,881,243**
 - * **Pending Hg patents: EU #10/596,400; USA # 04806657.5**
 - * **Registered Patent, for using of Reagent # 132347**
- Lextran has set its goals in reducing the air pollution by developing a cost effective installation for controlling the emissions of Nitrogen Oxides (NO_x), Sulphur Oxides (SO_x), Mercury (Hg) and other heavy metals.

The Business opportunity



- The reduction of the air pollution from power plants are a subject of great importance.
- Nitrogen Oxides (NO_x), Sulphur Oxides (SO_x), Mercury (Hg) and other heavy metals emitted by burning fuel, are an ecological burden of the first degree.
- Most of the governments and the environmental enforcing bodies have set strict standards to prevent dangerous pollutants' discharge to the atmosphere.
- **Lextran** patented processes are cost effective and user friendly compare to any existing conventional solutions

Lextran Technology



- The **Lextran** DeSO_x + DeNO_x + DeHg technology is a unique, patented **3 in 1** gas cleaning technology using a wet scrubber & employing the **Lextran liquid catalyst** in a water emulsion, to treat SO_x, NO_x and Mercury. These 3 major pollutants are purged in one wet scrubber.
- The **Lextran** process is a single step, simultaneous multi pollutant removal approach. The chemistry is complex and involves mass transfer between gas and two liquid phases and a set of chemical reactions.
- The **Lextran** process meets or substantially exceeds all current regulatory requirements for coal fired power plants:
 - **Almost complete removal of SO_x**
 - **Up to 70% removal of NO_x**
 - **Almost complete removal of Mercury**
- It is a very simple installation with only a minimum of equipment and **only liquid reagents**, and it requires a relatively small footprint.

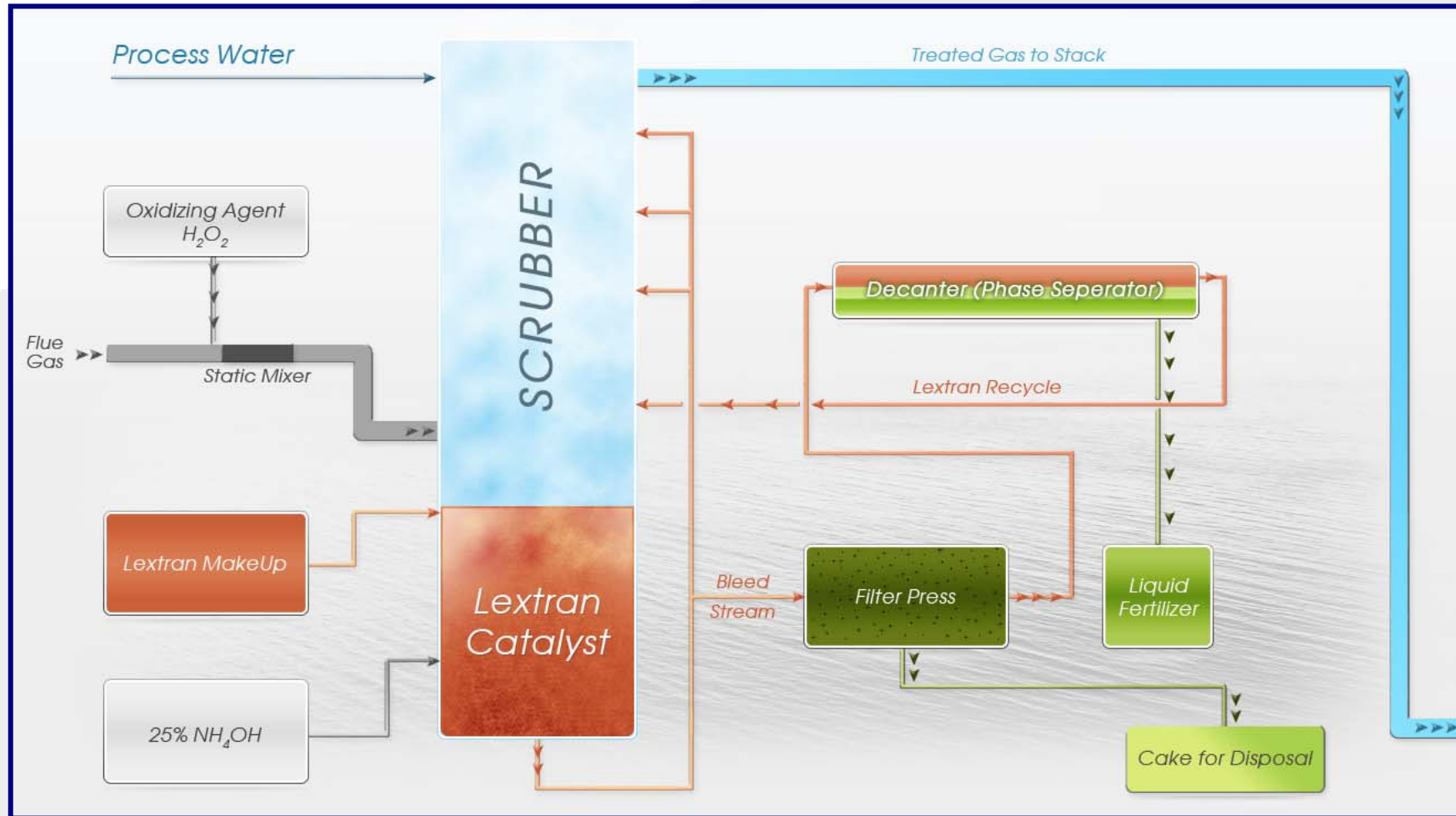
Process Description



Utilization of the **Lextran** chemistry is achieved using the following steps:

- Absorption of SO_2 and N_2O_3 in the **Lextran**-water emulsion in a conventional gas-liquid contacting "absorption tower".
- Oxidation of the Lextran-oxides complex in "oxidation tank" at the bottom of the absorber, using excess of oxygen from the flue gas.
- Removing of the water dissolved salt from the system by separating the aqueous phase from the Lextran phase, through a constant bleed from the circulation stream across the scrubber into the "decanter".
- The bleed stream into the "decanter" passes a filter to remove accumulated particulate matter.
- Neutralization of the acids using basic compounds such as 25% NH_4OH to form Ammonium Nitrate and Ammonium Sulphate salts which can be used as a fertilizer.

Schematic Process Diagram



Lextran Performance - indicative



POLUTANT		Units	Power Station, Coal - 25 MWe	Diesel Engine, Heavy Fuel	Diesel Engine, Oil Fired	Reference URS Lab. (USA)
SOx	in	mg/dNm ³	5200	2500	1500	5600
	out	mg/dNm ³	10	1	1	224
	removal	%	99.8	99.9	99.9	96
NOx	in	mg/dNm ³	450	4000	252	280
	out	mg/dNm ³	180	1600	56	90
	removal	%	60	60	77.8	67.8
Hg	in	µg/dNm ³				30
	out	µg/dNm ³				0.3
	removal	%				99

dNm³ = dry normal cubic meter

Lextran excellent results in pilots and laboratory tests



Thank You !