



MERCURY RECOVERY TECHNOLOGY

Safe and Responsible Recovery and Recycling



CONSTRUCTION & MINING



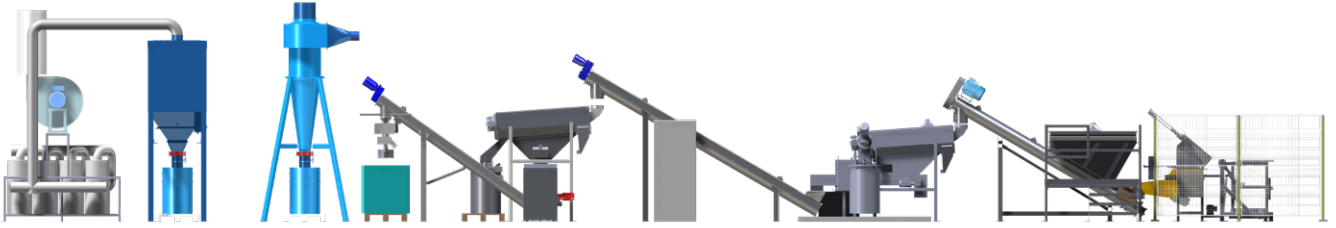
OIL & GAS



MERCURY CONTAMINATED WASTE



RECYCLING



OUR HISTORY IS OUR STRENGTH

Established in 1979 with first patent registered in 1978, MRT System AB has been business leader and driver of development in Mercury Recovery Technology over four decades.

With more than 300 successful installations worldwide MRT System AB is present on all continents. Through a dedicated specialist network of representatives MRT System AB is Locally Global with a very high level of Service and Presence.

SAFETY AND ECONOMY

Focusing on safety in handling Mercury as a hazardous bi-product in recycling, while still ensuring the maximum efficiency as well as highest possible value of recovered material is No. 1 objective of all MRT's solutions. Given the toxicity and impact Mercury has on living organisms all MRT solutions has 100% focus on keeping the work environment safe and secure for operators of the equipment. Secondly all equipment is fitted with filtration systems ensuring that no harmful emissions are affecting the greater environment. Last but not least, output fractions keeps the highest standards in cleanliness and separation ensuring the highest value in the recovered material.

INNOVATION, SERVICE AND SUPPORT

MRT System AB is a technology driven company always on the forefront of development. Having a high level of Innovation, has resulted in a number of patents as well as a strong focus on compliance to regulations and industrial standards. To support our clients operations MRT System AB has an extensive Service and Support package ensuring that clients always has fast and easy access to original spare parts as well as Service and Advice.

In summary MRT System AB is committed to supplying their clients with equipment providing highest value in operation and material output.

For Returnity

MRT SYSTEM AB





AREAS

GENERAL INTRODUCTION

Problems with Mercury contamination occurs in different areas. For example when recycling used products such as flat panels, light sources and batteries. It's also common in the mining, oil and gas industry. In construction processes there could be contaminated soil that may need to be sanitized. Our focus is to identify Mercury problems and turn them into profitable business possibilities.

CONSTRUCTION AND MINING

When cities are growing, what was previously urban areas used for industries, is required for exploration and development of housing projects. Industrialized areas all of a sudden is within city limits side by side with office buildings and housing areas, giving much lower tolerances for the presence of hazardous material. As Mercury is naturally occurring in soil and rock formations, test for Mercury is getting more common at construction sites. Mercury is naturally occurring in the soil and ore excavated when mining. Coal deposits in particular can contain high levels of Mercury, which can be released in the excavation and handling process. In Gold mining Mercury extraction can be used as last step in purification.

OIL AND GAS

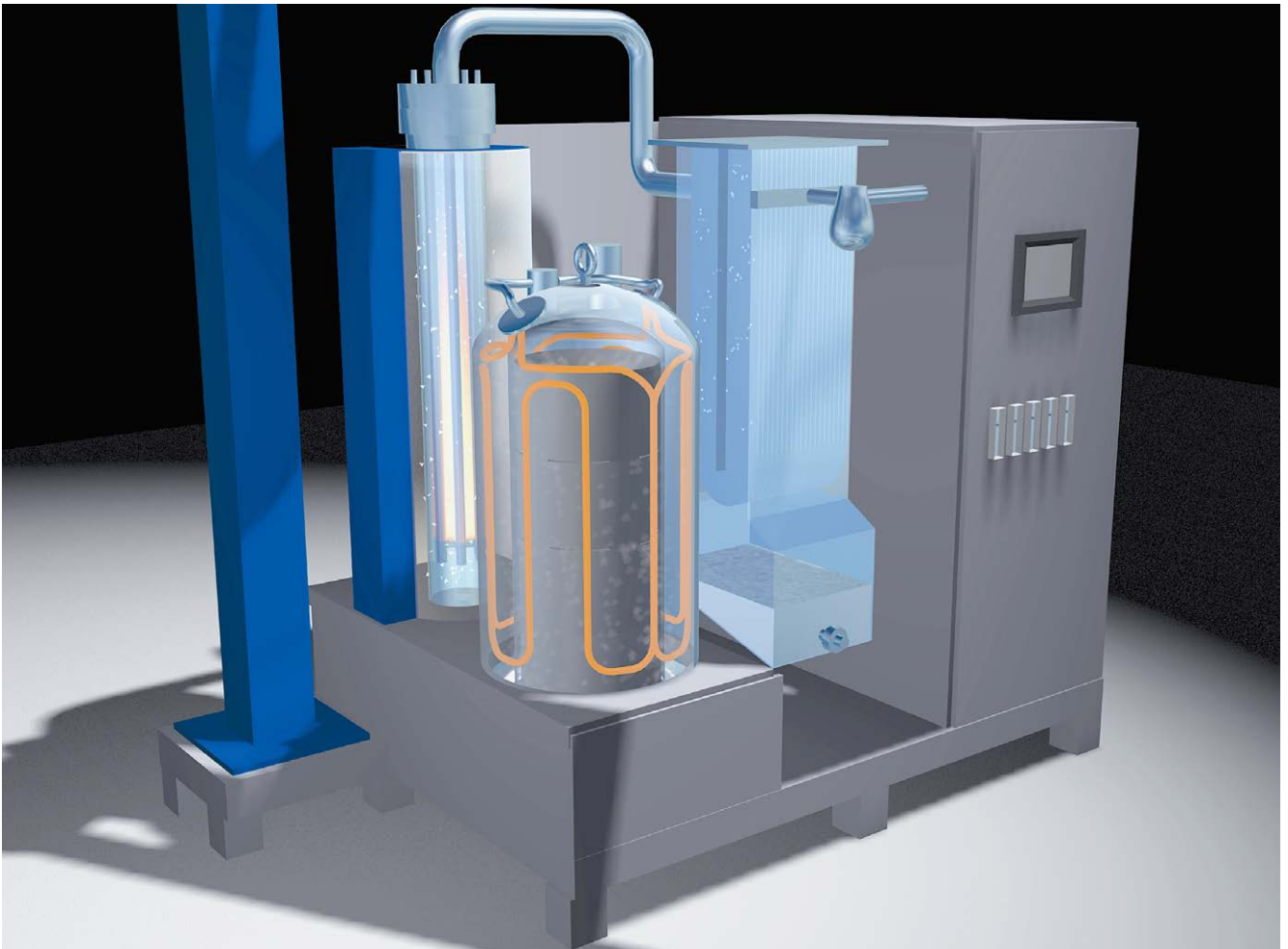
In exploration and refining Mercury can affect and contaminate in a lot of stages. Mercury is naturally present in soil and rock formation, but also very common inside the Oil and Gas deposits itself. The result of this is that most common is contamination of drill mud and sludges, drilling pipes and spools as well as hoses and catalysts

RECYCLING

Mercury has historically been used in light sources used not only as lamps to illuminate rooms, but also as light source in TV's and monitors. Mercury has also been extensively used in batteries present in many of our daily used gadgets. When recycling material from items where Mercury is incorporated, depollution is necessary first before dismantling and reuse.

MERCURY CONTAMINATED WASTE

Different kinds of waste contaminated with Mercury is a worldwide problem. Common contamination sources are for example batteries, thermometers and amalgam from dental fillings.



SOLUTIONS

GENERAL INTRODUCTION

MRT System has an impressive and dedicated line of Mercury Recovery solutions for different purposes. Our Lamp Processors, Flat Panel Processors and Batch Distillers helps you achieve safe and efficient Mercury Recovery. Our solutions can increase profitability in almost every step in the process. From dismantling, crushing and separation of fractions to distilling and minimizing volumes of contaminated waste.

DISMANTLING - WEEE

Our solutions for recycling of Flat Panels are designed to ensure fast and secure dismantling of valuable parts without compromising on safety when removing the Mercury containing parts. The FPP cutters automatically make two cuts at the perimeter of the panel resulting in clean and safe separation in a more efficient way than traditional methods.

LAMP PROCESSING

When handling lamp waste there is more and more focus on material recycling as an increasing amount of technology is used in lamps today. In order to regenerate material value it is

imperative to be able to single out the different fractions in as pure form as possible and to ensure that valuable components are made available for reuse.

The MRT Lamp Processing technology applied in our LP Series provides solutions that will give the highest output value while isolating Mercury containing material.

DISTILLING

The cleanest and most environmentally friendly way to recover Mercury from any substrate is by heat. In MRT distillers Mercury is extracted in a totally closed process ensuring safest and cleanest result, with lowest level of emission and highest level of Mercury cleanliness.

Depending on substrate and volumes there are several options both with Batch Distillers (BPD) or Continuous Process Distillers (CPD). Batch distillers are suitable when you have either small volumes or a lot of different material requiring separate programs. When having large volumes of the same material a Continuous Process Distiller will be most feasible as it can run 24/7.

PRODUCTS

GENERAL INTRODUCTION

What ever Mercury contamination problem you are challenging, MRT can make it solveable. Take a look below and learn how our products can handle Mercury problems and also turn them into profitable business possibilities.

FPP

The flat panel processor is a versatile machine to disassemble a large range of LCD panels. The processor allows for secure extraction of the fluorescent lamps and separation into the different fractions. The processor can be fed manually or mechanically via conveyor belts. The FPP cutters automatically make 2 cuts at the perimeter of the panel, allowing for clean and safe separation. The processor can be fed with panels up to 1600mm x 1200mm and 60kg.

LP

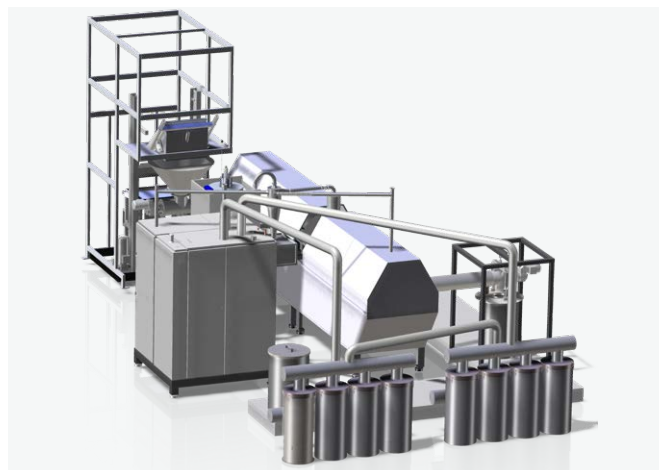
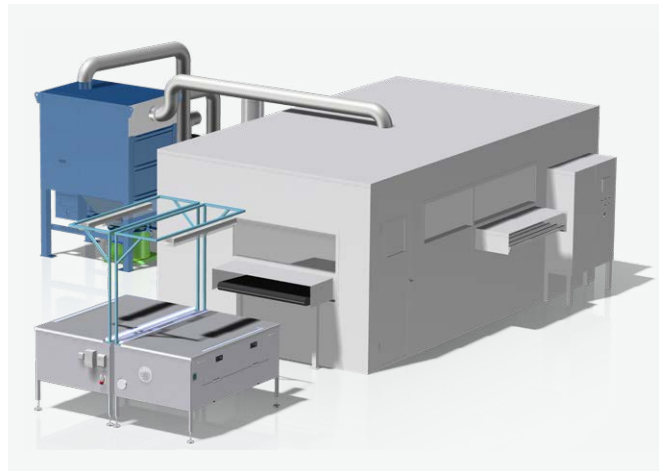
The MRT Lamp Processor is designed for processing Fluorescent Lamps and tubes of different shapes and types. The machine crushes and separates the material into a glass fraction, fluorescent powder, e-base/socket/end-cap fraction. The machine is equipped with two manual feeding stations, one manual 140 L wheelie-bin turning device for CFLs and pre crushed lamps as well as one manual horizontal feeding table for TLs, this to optimize the output qualities. All material fractions are discharged into 200 L steel drums, except for glass which is discharged in a 1 m³ big-bag.

BPD

The BPD is designed for processing all kinds of mercury contaminated waste. The process is fully automatic which makes it extremely safe by minimizing the risk of human error. All essential functional parameters such as pressure, temperature and process time are adjusted to conform to the waste treated. This enables optimum efficiency.

CPD

The CPD distilling process is just as efficient, safe and fully automatic as the BPD process. The CPD is designed for 24/7 operation and is particularly suitable when having large volumes of the same material to process.





MRT PREMIUM™

GENERAL INTRODUCTION

The value of MRT equipment is 100% defined by its performance and operational cost. Therefore we always recommend using MRT certified parts and to regularly service the equipment as recommended. Taking advantage of the MRT Premium™ concept easy access to Original parts, Service Technicians and Online support is guaranteed. As all MRT solutions are supplied with a router installed as standard, our clients can get remote support and service of vital functions in the equipment. Nobody knows MRT machines better than MRT.

MRT PREMIUM™ MODULES

MRT Premium™ Connect – remote service and monitoring.

MRT Premium™ Spares – all parts in a MRT solution are carefully selected and major part are specifically made for MRT. Original parts will perform better, longer and cheaper.

MRT Premium™ Service – No one knows MRT machines better than our technicians.

MRT Premium™ Trade – With a complete service log you will be able to maintain a higher second hand value. Through the MRT Premium™ concept, MRT will offer to promote equipment you want to sell on the second hand market.

MRT PREMIUM™ SUMMARY

The value of your equipment will in the end be defined by performance and state. For example will, without any doubts, regular service and using original parts from MRT result in

- Maintained quality
- Prevention of unnecessary down time
- Enable planning of maintenance and turn arounds

In short, with MRT Premium™ you'll optimize the quality, productivity, efficiency and profitability of your investment.



ONE PLANET – RESPONSIBILITY OF ALL

Mercury is a naturally occurring element found in rocks, soil, water and even air. It's the only metal that takes on a liquid form at room temperature and is widely used in the manufacturing of for example lamps, batteries, thermometers, teeth filling and in the gold mining industry. Also residues of mercury often gets mixed with soil, drilling fluids and other bi-products when drilling for oil and gas.

WHY IS MERCURY A PROBLEM?

Mercury is highly toxic and industrial usage has often lead to leaches and contamination. Mercury exposure at any level can cause damage to the brain, heart, kidneys, lungs, and immune system – basically everywhere!

Humans are exposed to mercury mainly via contaminated food – especially sea food. Larger quantities of mercury are released when burning hazardous waste or f ex producing chlorine, as well as the improper treatment and disposal of products or wastes containing mercury. Mercury is also found within coal, so when coal is burned, mercury are released into the environment. Regardless of the specific source or method, mercury leaches into the atmosphere and eventually the eco system.

SOLUTION

A complex problem is of course followed by complex solutions. Laws and regulations, better public awareness, development of new technologies and responsible high end recycling are important components that matters. As an example the EU takes action to protect citizens from mercury pollution. Since 2011 it is forbidden for EU members to export Mercury. There are also rules for storage and deposit as well as safe transport and handling and the Minamata convention on Mercury limits and prohibits the use of Mercury in products and industrial processes as of 2020.

ON TRACK WITH MRT SYSTEM

Established in 1979 and first patent registered in 1978, MRT System was the first to introduce a complete recycling system considered to be top of the line when it comes to efficiency, reliability and user friendliness. We also provide Distillers for Mining, Oil & Gas, Process industries, Soil sanitation as well as Lamp and Flat Screen recycling. MRT System will be a dedicated partner in taking one of the most important responsibilities of today – decreasing the mercury pollution.

			
			
			
			 <p>ARE YOU THE NEXT MRT SYSTEM PARTNER? We'll help you turn Mercury problems into profitable options.</p>

OUR PARTNERS

We choose to define our customers as our partners. They are our most valuable asset continuously providing us with important end user points of view, and new reality perspectives.

Relations and cooperations that are fueling our urge for developing even more efficient solutions and products.