

## PAPER BOARD, PULP & PAPER APPLICATION

# PAPER & PACKAGING

#### **EFFLUENT TREATMENT AND RECOVERY PLANT**

Installation of water recovery systems either within the mill or incorporated into the existing effluent treatment plant can substantially reduce water requirement and disposal costs.

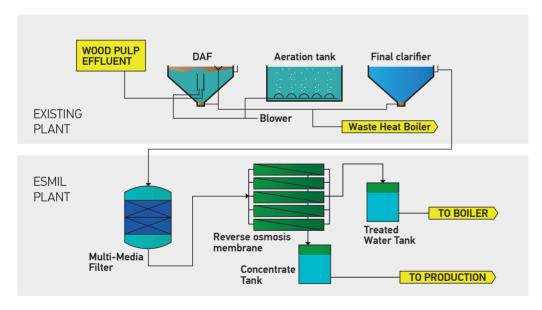
#### **APPLICATIONS**

The system developed by ESMIL PROCESS SYSTEMS is suitable for a wide range of applications within paper and packaging mills.

- Recovery of wire water by the removal of suspended solids down to 1 micron
- Removal of heavy metals from De Inking lines
- Recovery of white water by the removal of residual organics and hardness
- Recovery of final effluent by the removal of residual organics and hardness

#### THE «ZERO DISCHARGE» PAPER & PACKAGING EFFLUENT PLANT

The Esmil «Zero Discharge» Wood Pulp Effluent Plant combines the advantages of conventional physico-chemical processes with proven membrane technology. All solid and liquid phase outputs may be recoverable thereby resulting in a «zero discharge» plant.



**Permeate** for use as general site process water or boiler feed.

**Concentrate** for use as chemical make-up water.

**Sludge** for use in waste heat boiler.

The plant can be substantially automated and an operator can be fully trained within a matter of weeks.

#### INNOVATION THROUGH DEVELOPMENT

In 1999, ESMIL PROCESS SYSTEMS was awarded the Queens Award for Environmental Achievement for the development of "State of the Art" treatment and recovery plants.

#### **REFERENCES**



# SPECIALISTS IN THE TREATMENT OF CHALLENGING INDUSTRIAL EFFLUENTS

## **BENEFIT SUMMARY**

Competitive Advantages of Esmil Plant	
Application	Recovery of Wire Water by the removal of suspended solids down to 1 micron Removal of Heavy Metals from De-Inking lines Recovery of White Water by the removal of residual organics and hardness Recovery of Final Effluent by the removal of residual organics and hardness
Rapid Investment Pay back	Reduced effluent disposal costs Reduced towns water / natural water take requirement Reduced manpower requirement No generation of by-product such as waste sludge
Product/Resource Recovery Effluent Reduction, Recycle & Re-use	Non destructive treatment process Excellent final effluent quality Process water recovery for general re-use RO concentrate recovery for reuse as chemical make up water Solids recovery for on site incineration
Confidence of Environmental Compliance	Robust treatment process that is not affected by toxins, overloading or adverse temperature Fixed physical barrier thereby guaranteeing compliance No emission of odours or green house gasses State of the Art Technology
Modular System	Discrete process units for incremental upgrading