

Application story



Containerboard Mill converts to Bio Fuel for 70% Emissions Reduction

Location	Sweden (Installation: 2010)	Hydra-Cell model	G35EKSJHFEMH
Type of application	Fuelling Furnaces	Flow rate	Up to 140 l/min (37 gpm)
Liquid	Bio Oil	Pressure	Up to 83 bar (1200 psi)
Application details	The containerboard mill of a major packaging producer in northern Sweden has reduced carbon dioxide emissions by 70% since 2006 – mainly through a project to use environmentally-friendly bio oil instead of fossil fuel oils in the furnaces and recovery boiler. Hydra-Cell seal-less pump technology has played a part in this. Heating oils are vital for use in circumstances where the main fuel (fine sawdust) cannot be used, and previously heavy oil consumption was as high as 3700m³/yr. It was essential to convert to bio oil, but the project was hampered by pumping difficulties. To feed the burner nozzles the old system used a conventional pump with dynamic seals, reliant on the lubricant properties of the fossil oils but exposed to wear when handling non-lubricants – such as bio oil and the pitch oil from which it is derived. That led to seal problems and a situation in which boilers had not been connected. Hydra-Cell distributor Telfa recommended and supplied 2 x G35 pumps (duty and standby). Reports from the mill indicate that the seal-less pump solution is working effectively and the distribution network has been extended. It is expected that bio oil will totally replace fossil oils except when using light oil for start-up, in emergency or after annual maintenance shutdown. The last report was that in over ten years of operation, the pumps only required minimal servicing and maintenance.		
Advantages of Hydra-Cell pump on this application	Seal-less design. Ability to handle non-lubricants. Ability to run dry without damage. Proven long-term reliability.		

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