Application story

WANNER™
HYDRA-CELL® PRO
SEAL-LESS PUMP TECHNOLOGIES

High Pressure Coolant for Grinding Turbine Blades (4)

Location	Israel	**Hydra-Cell model**	G35XDCTHFECA
Type of application	High Pressure Coolant for Grinding Turbine Blades (4)	**Flow rate**	100 l/min (26.2 gpm)
Liquid	Synthetic Grinding Coolant	**Pressure**	40 bar (580 psi) & 70 bar (1000 psi)

Application details

Despite having had problems in the past with screw pumps on Mori Seiki grinders, when Turbine-Jet (a subsidiary of Blades Technologies Israel) took delivery of 36 new Bridgeport grinders for VIPER grinding, they accepted the recommendations of the filtration supplier and installed screw pumps.

VIPER = ***V****ery* ***I****mpressive* ***P****erformance* ***E****xtreme* ***R****emoval grinding*

Even 5 micron filtration was insufficient to prevent severe wear in these screw pumps and over the next 8 years, the customer replaced almost 100 of these pumps until coming to the realisation that Hydra-Cell pumps were again the ideal solution.

The Hydra-Cell pumps are tolerant of metalworking fines and require little maintenance. Their high energy efficiency also generates significant power savings - 40hp motors replaced by 18hp ones to drive the Hydra-Cells)

Lessons to be learned are:

- Synthetic grinding fluids have insufficient lubricity to maintain the bearings in screw pumps.
- Particles of less than 5 microns still cause wear in screw pump bearings and seals.
- Screw pumps are inefficient when pumping water-mix fluids.

Advantages of Hydra-Cell pump on this application

Hydra-Cell was chosen for this application for the following reasons:

- Ability to run without the need for fine filtration systems.
- Vastly increased efficiency with lower energy costs.

Wanner Engineering - World Headquarters & Manufacturing
Minneapolis USA
t: (612) 332-5681
e: sales@wannereng.com

Wanner International
Hampshire UK
t: +44 (0) 1252 816847
e: sales@wannerint.com

Wanner Pumps
Shanghai CHINA
t: +86-21-6876 3700
e: sales@wannerpumps.com

Wanner Pumps
Kowloon HONG KONG
t: +852 3428 6534
e: sales@wannerpumps.com