

Automatic Valve Grinding

Distribution	
General Manager	<input checked="" type="checkbox"/>
Production Manager	<input checked="" type="checkbox"/>
Digestion Superintendant	<input checked="" type="checkbox"/>
Maintenance Manager	<input checked="" type="checkbox"/>
.....	<input checked="" type="checkbox"/>

- Proven 90% faster than manual grinding
- Delivers predictable, low leakage isolation
- Fits existing valves, no modifications needed
- Grinds in-situ, avoids costly changeouts
- Self powered and portable
- No sledge hammers
- No arduous manual grinding



Lewis Valve Grinder attached to Lunkenheimer valve

Consider the Benefits and Cost your Savings...

1 **Reduced Production Outages** as a result of valves that cannot achieve isolation (say 80%)

$$\begin{matrix} & \times & & \times & & = \\ \text{.....} & & \text{.....} & & \text{.....} & \\ \# \text{ of outages} & & \text{lost tonnage} & & \$/\text{tonne} & & \text{production \$} \end{matrix}$$

2 **Reduced Operating Labour** associated with valve grinding (in the order of 90%)

$$\begin{matrix} & \times & & \times & & = \\ \text{.....} & & \text{.....} & & \text{.....} & \\ \# \text{ of outages} & & \# \text{ of operators} & & \text{cost/operator} & & \text{operator labour \$} \end{matrix}$$

3 **90% Reduction in Lost Time Injuries** associated with valve grinding by elimination of hazardous manual activities

$$\begin{matrix} & & & \times & & = \\ \text{.....} & & \text{.....} & & \text{.....} & \\ \# \text{ of LTI's} & & \text{LTI unit cost} & & \text{safety \$} \end{matrix}$$

4 **Reduction in Delays to Planned Maintenance Activities** caused by inability to achieve isolation (in the order of 80%)

$$\begin{matrix} & & & \times & & = \\ \text{.....} & & \text{.....} & & \text{.....} & \\ \text{delayed shut hrs} & & \$/\text{hr} & & \text{delay \$} \end{matrix}$$

5 **Reduction in Valve Maintenance Costs** through reduced changeouts and damage from manual interventions (in the order of 60%)

$$\begin{matrix} & & & = & & \\ \text{.....} & & \text{.....} & & \text{.....} & \\ & & \text{maintenance \$} & & \end{matrix}$$

Total Annual Saving =



Lewis Automatic Valve Grinding Machine Features

The Lewis automatic valve grinding technology is the result of a joint development with Queensland Alumina Ltd.

The on-board grinding controller automatically advances the valve disc towards its seat at appropriate intervals to ensure maximum grinding rate is maintained. This eliminates substantial time wastage between each advance. The extent of each advance is selectable by the operator to accommodate scale of differing hardness. On completion of grinding, or if a fault occurs, the machine will stop and alert the operator.

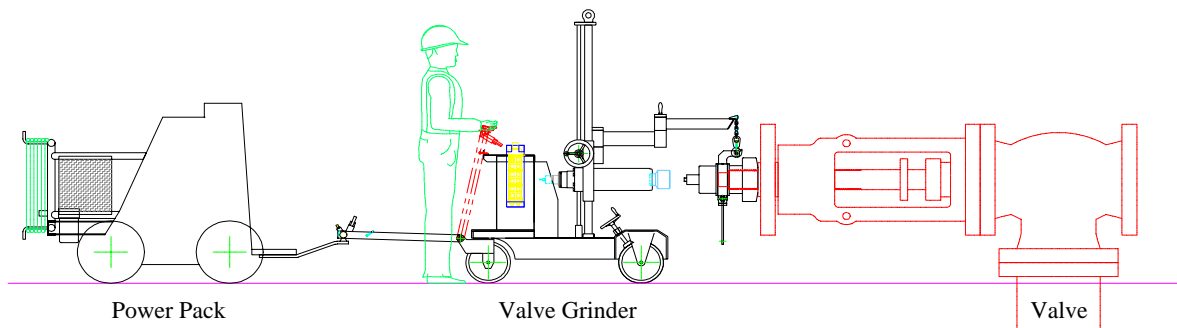


The valve grinding unit undergoing site trials.

When grinding Lunkenheimer valves the manual lock-nut is replaced by a specially developed clutch, only for the duration of grinding. The locknut is replaced at the conclusion of grinding and the grinding machine is moved to the next valve.

A standard machine is available to fit valve actuating drives in the height range of 500mm to 1550mm.

The technology is adaptable for a range of valve sizes and valve types.



Machine Specifications

Mobile Power Pack

Length	1550mm
Width	970mm
Height	1600mm
Weight	860kgs
Power (diesel)	15 kw

Valve Grinder

Length	1430mm
Width	1120mm
Height	1980mm
Weight	660kgs
Valve height range	500mm to 1550mm

(Specifications and design subject to change without notice.)

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