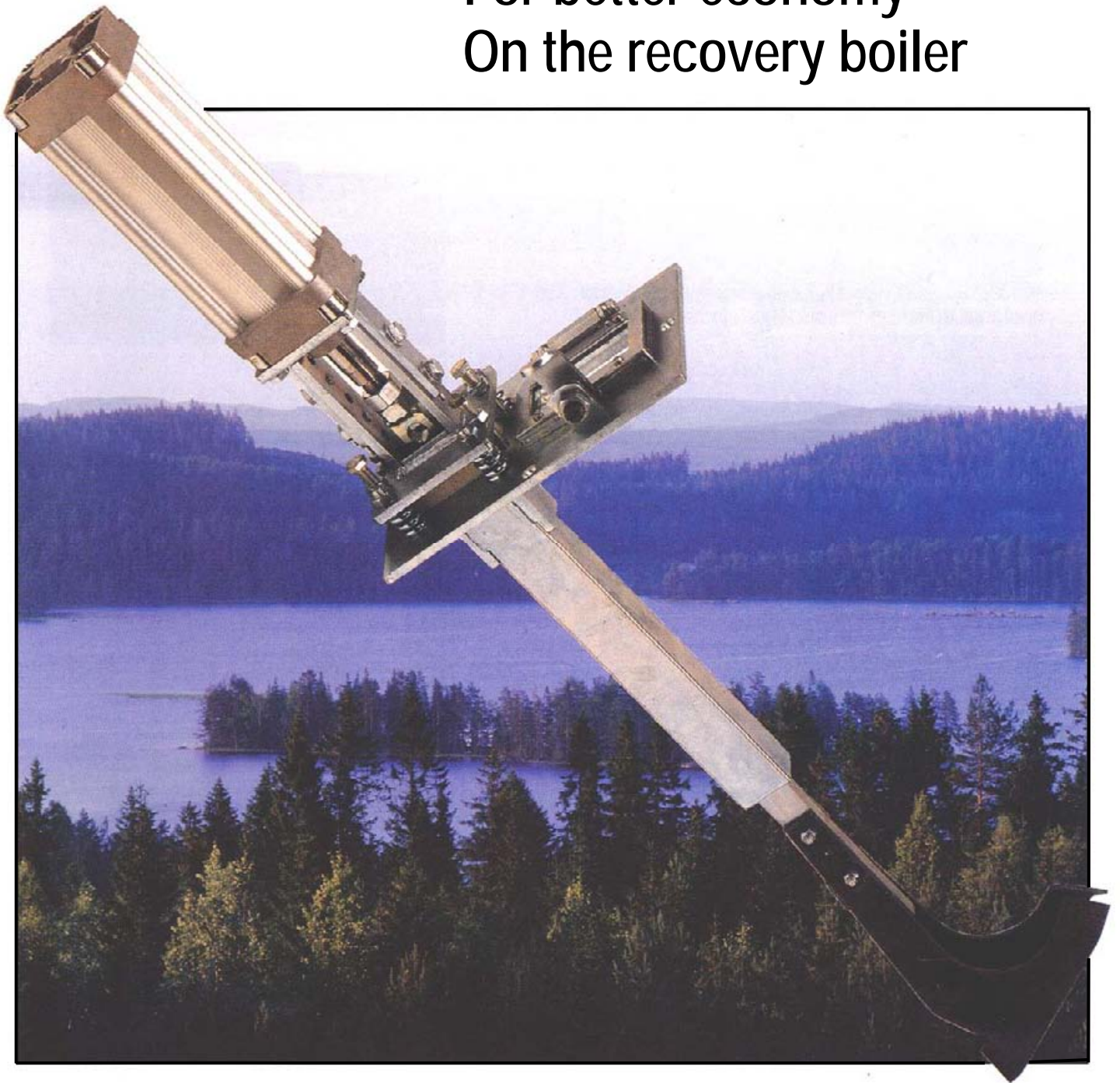


DIAMOND Rodding Robot

For better economy
On the recovery boiler



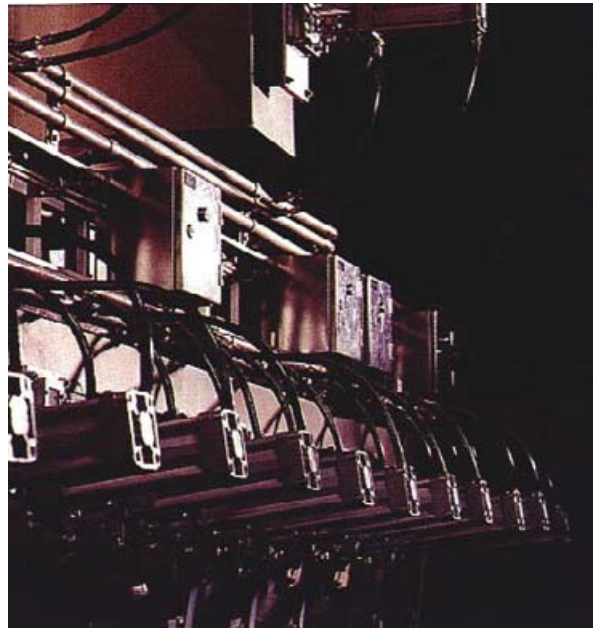
Reduces emissions and increases capacity!

Diamond Power
(Australia) Pty. Ltd.

BETTER ECONOMY ON THE RECOVERY BOILER!

Automate the air port cleaning with the **DIAMOND** Rodding Robot.

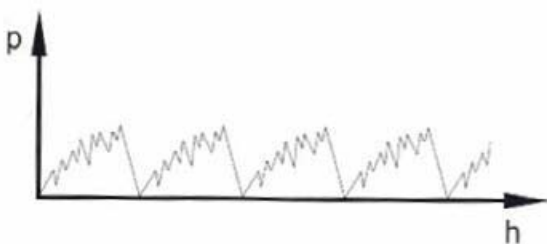
With automated cleaning, the air ports are cleaned regularly which increase the capacity of the recovery boiler, hence increasing steam production and reducing emissions. Manual air port cleaning is often irregular, leading to unstable boiler operation. And it is hard, hot and dangerous work.



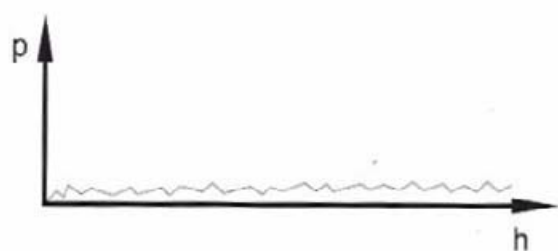
The benefits of automatic rodding!

- Completely clean ports at all times
- More stable boiler operation
- Better SO₂ combustion
- Easier to keep the bed in shape
- Higher bed temperature
- Increased steam production
- Greater recovery boiler capacity
- Labour saving
- Reduced risk of injury
- Less need for soot blowing
- Longer operating times between stoppages for boiler cleaning
- Reduced NO_x

In the end, better economy!



Manual air port cleaning



Automated air port cleaning

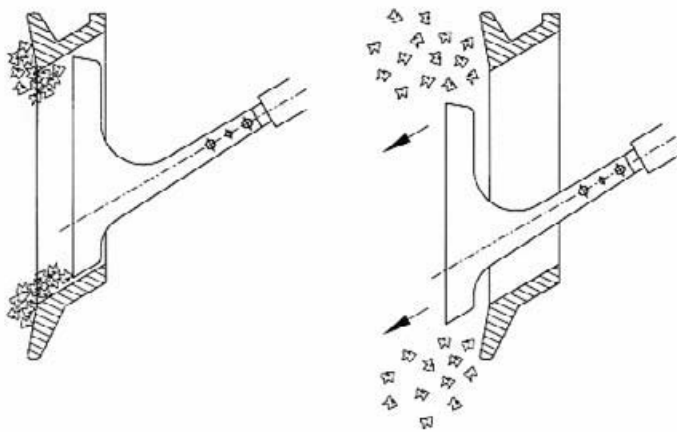
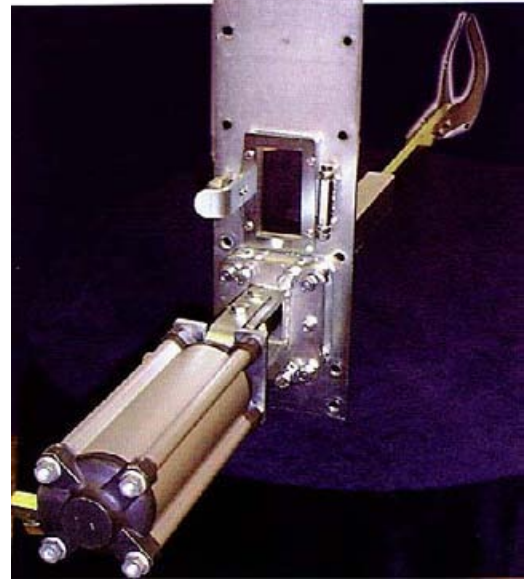
The diagram shows the air duct pressure for the different cleaning methods

DIAMOND Rodding Robot.

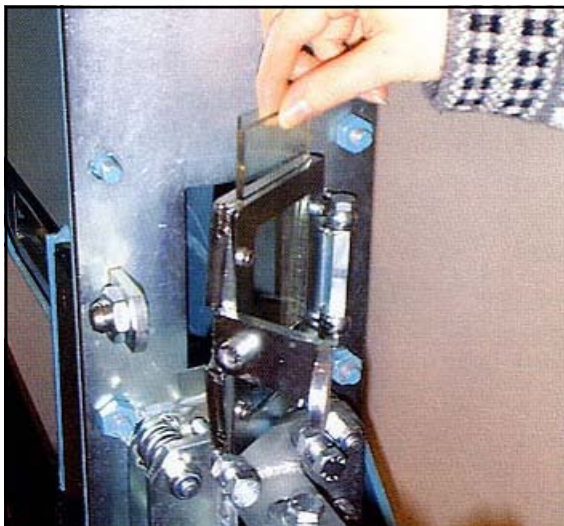
SIMPLE-ROBUST-RELIABLE

The idea has always been to make the **DIAMOND** Rodding Robot as user-friendly and easy to maintain as possible. The principle is based on cleaning the entire port with one stroke of a pneumatic cylinder. This is the most compact and lightest rodding robot on the market, and there are no moving parts outside the boiler wall.

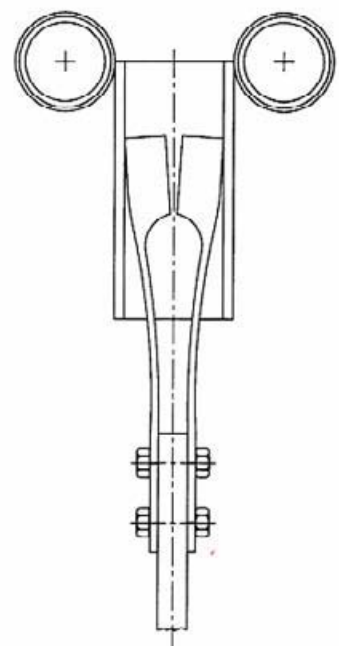
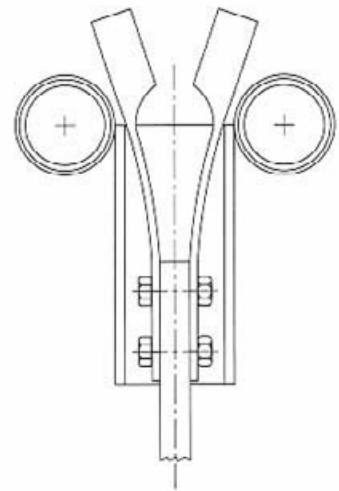
The **DIAMOND** Rodding Robot fits all types of recovery boiler.



The rodding tool cleans the **entire** port, even the base, so the air can even cool the weld between the tube and the port.



Large opening view glass for optimum boiler inspection. The view glass is easy to replace or clean.

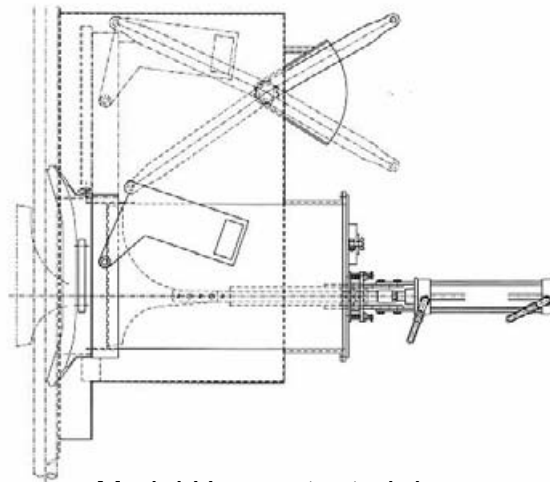
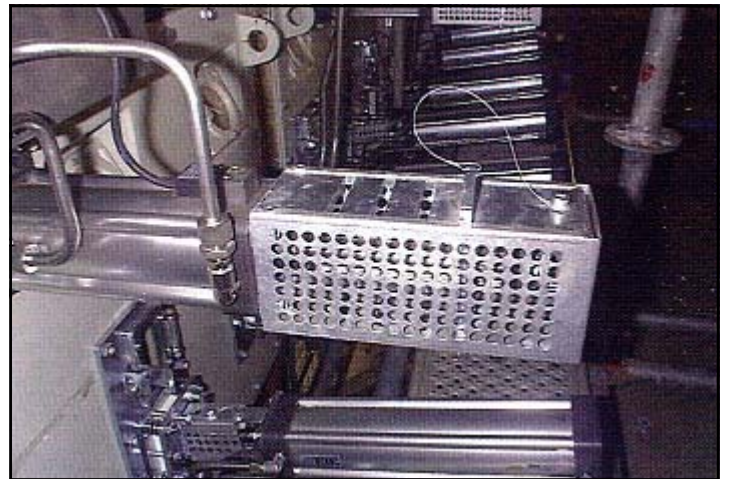


Unique patented rodding tool **FLEXHEAD** which expands inside the boiler tubes for effective port cleaning.

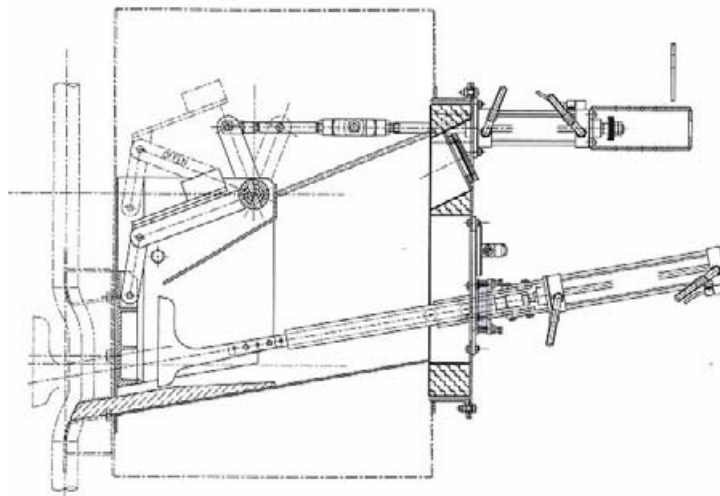
DIAMOND Rodding Robot with damper adjustment

For optimum gas combustion and reduced emissions, it is important to adjust the penetration of the air into the boiler, in particular at the secondary and tertiary levels but also higher up the boiler.

The **DIAMOND** Rodding Robot is available with pneumatic or electrical actuator for damper adjustment.



Model H - a patented damper modified to fit the existing manual damper control.
The port can be rodded **irrespective** of the damper position.



Model GC - for existing guillotine dampers. The diagram shows a pneumatic actuator with mechanical damper position locking.

DIAMOND Rodding Robot for TRS Gas Combustion

A unique design to improve the working environment

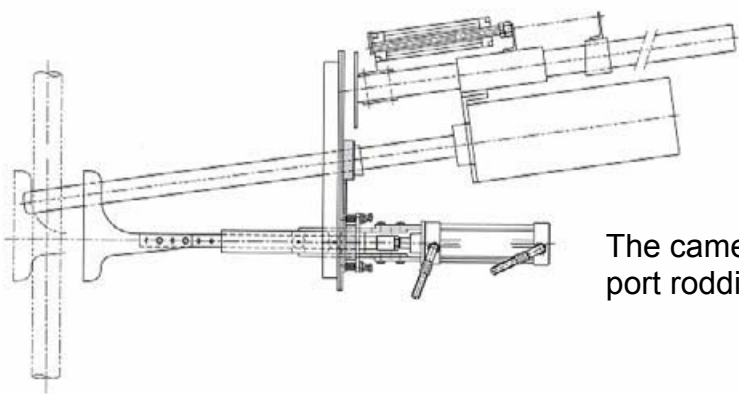
DIAMOND Rodding Robot Model GT

TRS emissions are now also burned in the recovery boiler. **DIAMOND** has therefore developed a gas-tight model which means that foul and toxic gases cannot escape into the boiler house.



DIAMOND Rodding Robot Model CAMROD FOR Bed Camera

The **DIAMOND** Rodding Robot holds the port open the whole time, so that the camera can monitor the bed continuously. The rodding robot is fitted with an extractor unit which extracts the delicate lens if the cooling air fails. In manual port cleaning the lens is easily damaged; this is avoided by the use of **DIAMOND** Rodding Robot CAMEROD.



The extractor unit is activated on failure of the cooling air.

The camera need not be extracted during air port rodding.

DIAMOND Control Equipment

Simple Proven Technology

The **DIAMOND** Rodding Robot is controlled using simple proven PLC units which form part of the standard **DIAMOND** supply.

Alternatively, the rodding robots can be connected to an existing control system.

The control equipment is installed in a splash proof stainless steel cabinet.



Example of PLC.

DIAMOND Control Equipment

Maintenance friendly

The **DIAMOND** Rodding Robot is very maintenance friendly and easy to operate.

Maintenance is performed on one rod at a time which can easily be removed in a few simple actions.



Spare parts are kept in stock in Sweden and by the **DIAMOND** representatives in each country.

DIAMOND Rodding Robot

Simple, robust and reliable

Light and compact

Fits all boiler types



The picture shows a complete **DIAMOND** Rodding Robot installation

Patented flexible rodding tool FLEXHEAD

The cutting head design gives maximum air flow

Complete visibility through the cutting head

Low maintenance costs

Short "pay-off" time

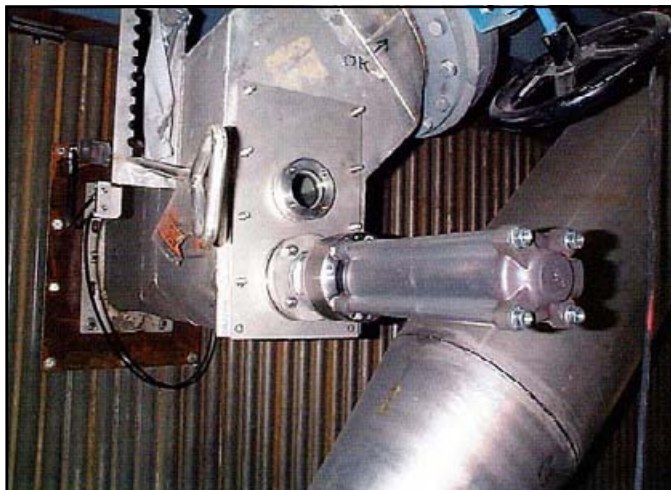
No moving parts outside the boiler

References throughout the world

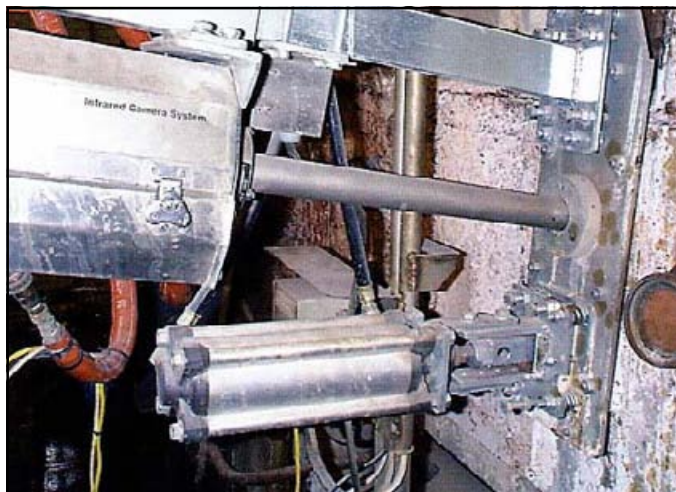
PORT RODDING SYSTEMS



Installation of Diamond Rodding Robot on primary air level.



Installation of diamond Rodding Robot GT gas tight port rodder for DNCG.



Installation of CAMROD for rodding of IR bed camera port.



Installation of SPRAYROD for rodding of splash plate on black liquor gun.