

## CASE STUDY

### *Go-Co Cartridge Cleaning Nozzles*

### *Bisalloy Steels*

Bisalloy Steels Pty Ltd, a leading steel processing company of Wollongong in New South Wales, Australia, receives sheets of raw steel from BHP, Australia's largest steel producers.

Bisalloy then process the raw steel for use in all types of industries. An essential part of the process requires the steel to be surface blasted to remove any surface irregularities.

Using W Granowski blasting equipment, this process inherently generates high levels of dust. The dust is extracted from the workplace through a series of ducts to a Granowski dust collector system outside the main building.



Bisalloy Steels has experienced the usual problems associated universally with dust collector systems, ie, frequent filter replacement caused by an inadequate cleaning system. Extensive tests of the system revealed that the venturi design had a pressure profile down the wall of the cartridge that varies from negative at the top of the cartridge to strongly positive at the bottom.



This profile, coupled with an over-frequent cleaning pulse, resulted in the bottom section of the cartridges deteriorating. Hence, the existing cartridge cleaning system was ineffective in reducing the pressure drop across the filter.

Goyen was called upon, and in collaboration with both Bisalloy and Granowski's, it was decided to fit Go-Co cartridge cleaning nozzles to rectify the problem. With the cartridge cleaning nozzles mounted directly into the existing blowtube cartridge design, the retrofit was simply accomplished.

Once installed, the GO-CO cartridge cleaning nozzles proved very effective by evenly cleaning each cartridge in the dust collector. So effective in fact, Bisalloy Steels decided to fit the Goyen GC 3000 demand cleaner to the dust collector.

This demand cleaner has provided Bisalloy the following benefits.

- Reduced air consumption from 47, 52oft3 /day to 31 68oft3 /day
- Provides an annual saving to Bisalloy in the order of AUD\$57,238,00
- Extended cartridge life by a factor of 30-60%
- Overall payback period for the entire retrofit to Bisalloy is approx. 3 weeks.

Since installing this Goyen system upgrade, Bisalloy have conducted isokinetic testing which show dust levels emitting to the atmosphere of less than 0.5mg/m<sup>3</sup>, a result which is almost immeasurable.

Bisalloy are to be commended for their prompt attention to this problem which illustrates their responsible corporate commitment to minimising emissions into the general area.

