

# METALWORKING NEWS

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# 46 Years of engineering craftsmanship



Wesley and Walter Bellora

Industry in Italy is characterised by a large number of small, family-owned companies, almost all of them located in the northern part of the country, where industry in Italy is concentrated.

The Italian engineering industry has not escaped this scenario and the picture still holds true today. However industry in Italy has not just relied on the family businesses alone. Some big, internationally recognisable names have emerged, names that don't leave you guessing, especially in the engineering field.

With a strong emphasis on artisans and craftsmanship these Italian companies built an enviable reputation, passing the skills on to the next generation. The history of engineering will reveal that Italian artisans have made a name for themselves worldwide and are held in the highest regard. World War II left Italy in disarray and many of these artisans looked internationally to create a new life.

South Africa was to benefit with a number of these immigrants choosing to venture south of the equator.

Two such gentlemen were the late Rinaldo Bellora and the late Luigi Giordana. Rinaldo learnt his trade at Graziano Tortona Srl where they manufactured the world renowned Graziano lathes. After immigrating to South Africa in 1952, Rinaldo worked for H. R. Lasch (Pty) Ltd, in Germiston, Gauteng machining parts for the overhead Lasch cranes.

Luigi had worked for the Italian Air Force and Fiat Automobile as a grinder before joining up with his friend Rinaldo in South Africa, Luigi then worked for Paramount Gears (pty) Ltd. and on 27 January 1966 B.C.F. Precision Grinding Works (Pty) Ltd. (BCF) was established.

Grinding jobs for customers such as Nordberg and E.C. Lenning enabled BCF to steadily expand and in 1969 they found a niche in the market to service the wear parts and recondition spares or replacement parts for the steel mill Union Steel Corporation Ltd. which was based in

Vereeniging. By 1979 rollers, shear blades and various other components and wear parts for Vaal Works and Klipworks were being reconditioned by the company.

Although the company had focussed on grinding type applications in the beginning the mix of disciplines offered has changed considerably. Precision grinding is still very much part of the company requirements, however cnc turning, milling and



An overhead view of the machine shop



The mix of components that BCF manufactures as replacement parts or spares has increased considerably over the years. These include many different sizes and shapes of guide rollers, shear blades and shafts and today total 722 items. These are either manufactured from forgings or are machined from solid bars or blanks. BCF holds stock inventories of up to nine month lead times and up to 15 000 components can be manufactured by the company in one year



general machining is what accounts for the majority of the work carried out by BCF.

These disciplines are complimented by horizontal and vertical boring mills, polishing, wire cutting, spark erosion and the slotting of keyways.

As is customary in Italy second and third generation family members would join the company started by the father. This has been no different at BCF. Walter, Rinaldo's son, began working for the company in 1980 after completing his national service commitments.

"I had no formal training in any aspects of the business," recalls Walter. "I was employed to look after the administration and the servicing of clients, which were mainly the steel mills, as well as trying to increase the order intake. Being young and enthusiastic and very naïve no job was too complicated for Dad's company. Little did I know that from time to time I was being set-up and the optical illusion drawings handed over to me for quoting were not possible to machine. I soon learnt and have never stopped learning since."

"During this stage I would spend time on the shopfloor learning the basics of machining and how to operate the conventional machines that we had at the time. While they were still alive both my dad and Luigi continued to operate the machines daily. In fact both my dad and Luigi were still working for the company when they passed away at the age of 76 years and 83 years respectfully."

"It was as early as 1980, a couple of months after I joined the business that I realised how important artisans were to BCF. I took a decision with my father's permission to embark on surrounding ourselves with

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young talented artisans."

"Chris van der Walt, Petrus Mphela and a few years later Carlos de Almeida joined BCF.

Today these three artisans alone have a combined 89 years of service between them."

"The decision to surround ourselves with young artisans in 1980 has definitely been the most important business decision I have ever made. Carlos has since trained new young employees into impeccable artisans with strong basic founding skills."

"That quality is important for BCF and its clients. Carlos is also in charge of the production. 60% of our employees and staff have over 25 years service and even on their side second generation family members have joined the company," said Walter.

Limited by time taken on the conventional machines and coupled with an increase in volume and components required by clients, BCF invested in their first NC machine on the 5 January 1989. More have followed since and today the company has 13 CNC machines comprising lathes and machining centres. The newest machine is a Litz MV 1400 A which was installed just over a year ago. It came equipped with a fourth axis.

All machines are run via the EdgeCAM machining programme.

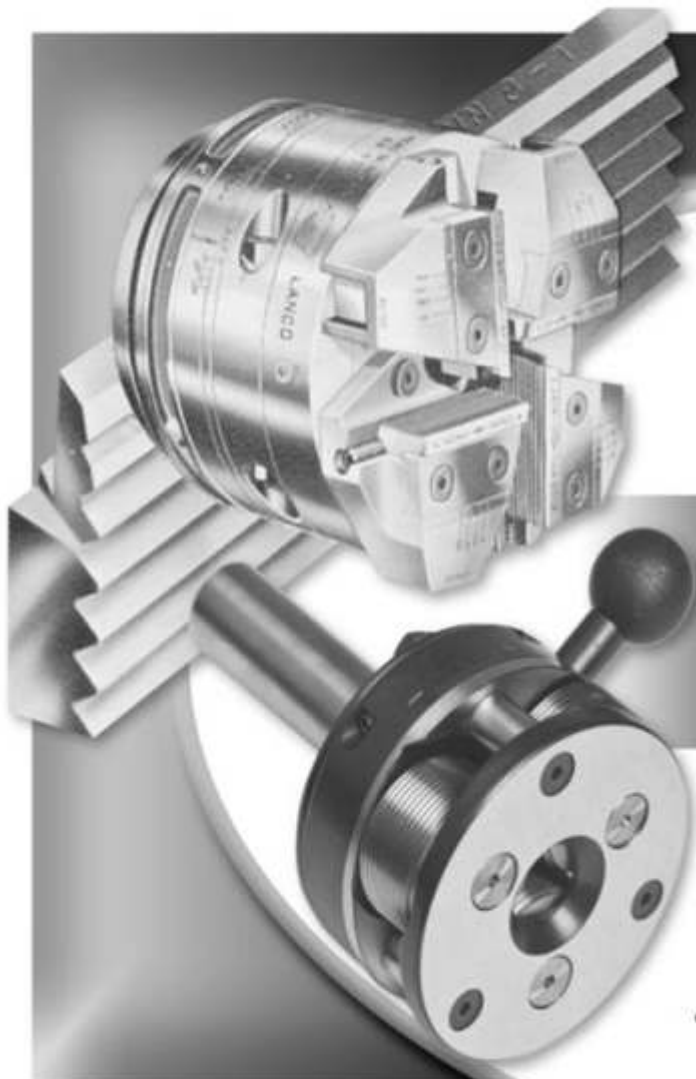
Besides most of the conventional lathes and grinders other machines that the company has includes a Chmer Wire EDM CW1060 HS, a Chmer spark eroder CM H322, a Rockford vertical slotter, Coccen band saw SH-7550S and other inspection and measuring engineering equipment.



Shear blades recently manufactured by BCF



Shafts in the process of being manufactured by BCF



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Other machines that the company has includes a Chmer Wire EDM CW1060 HS



The company can turn components with a maximum outside diameter of 1000 mm up to 3 000 mm in length on their lathes

The company can turn components with a maximum outside diameter of 1000 mm up to 3 000 mm in length on their lathes, and milling machine specifications are up to: length 3 000 mm x width 750 mm x height 2 000 mm. External grinding parameters are: outside diameters of 680 mm x length 2 500 mm; internal grinding: outside diameter swing 750mm X inside diameter 600 mm x length 550 mm and tool room surface grinding: length 3 000 mm x width 500 mm x height 1 000 mm.

Horizontal boring mill encompasses: length 2 000 mm x width 2 000 mm x height 1 500 mm. Vertical boring mill outside diameter 1 600 mm x height 1 000 mm and the slotting machine specifications are: outside diameter 2000 mm x 1000 mm height.

The mix of components that BCF manufactures as replacement parts or spares has increased considerably over the years. These include many different sizes and shapes of guide rollers, shear blades and shafts and today total 722 items. These are either manufactured from forgings or are machined from solid bars or blanks. BCF holds stock inventories of up to nine month lead times and up to 15 000 components can be manufactured by the company in one year.

"The majority of the components are for the steel mills but we are not limited to this type of machining," explained Walter. "We do have long standing contracts with most of the mills but we have broadened our base of clients over the years and are looking to increase the numbers."

One of the more interesting components that BCF has recently started manufacturing is locking rings and special shafts. "Made in stainless steel the rings are import replacement components. The rings are manufactured to very tight tolerances and we are pleased to say that our rings are outperforming the imported component," enthused Walter.

### Third generation

Keeping it in the family, Walter's wife Linda joined the company 22 years ago to manage the book keeping side of the business. But now a third generation Bellora is fully entrenched in the business. Walter and Linda's son Wesley joined in 2008 after completing training at Hotel School and a couple of years in the commercial field.

"When Wesley decided to join the family business I wasn't sure where he would fit into our mould and thought back to when I joined BCF that, the same type of scenario probably entered my father's mind 33 years ago. However with the clients we are currently dealing with we needed to implement a number of safety and quality procedures. I needed help on these admin aspects and this is where Wesley has been a great help. If you don't have these controls in place you are likely to lose the business. Besides that, we embraced the fact that our employees have been very loyal to the company and we needed to provide a safe environment that is conducive to productive and enjoyable working conditions."



The company also has a Chmer spark eroder CM H322

With a strong emphasis on artisans and craftsmanship these Italian companies built an enviable reputation, passing the skills on to the next generation

"Wesley however thrives on the work he does on the machines, an obvious gift from his grandfather's genes. He has exceeded all our expectations in this sector at BCF. Like all our valued artisans and employees Wesley has already become an invaluable asset to the family business."

"We have also attained a level 2 BEE compliance certificate, thanks to Wesley's dedication."

Currently the manufacturing facility of BCF occupies just over 1 000 m<sup>2</sup> under roof and two further buildings, each in the region of 480 m<sup>2</sup>, house a vast amount of materials that have not been machined. Included in the one is a training room and a specific health and safety office.

"Our goal is to make our customers comfortable with our artisans ability to not only make precision quality components for them, but to realise the importance of looking after people as a whole so that they may become efficient, to improve the standards of our industry in South Africa and to become even more competitive" Walter concluded.

For further details contact B.C.F. Precision Grinding Works on TEL: 011 827 4823 or email [bcf@telkomsa.net](mailto:bcf@telkomsa.net) ■



The Rockford vertical slotter is capable of machining components with an outside diameter 2000 mm and a 1000 mm height

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