

# AS 9100 QUALITY

NEW CHIEF EDITOR

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Courtesy of Machinery Magazine with photography by Andy Foreman



#### CASTLE OPENING AND BEYOND

On Tuesday 8th of September, Castle held an official opening for our new facilities. With key business partners and members of government in attendance. Dr Masahiko Mori, President of Mori Seiki machine tool Company, conducted the ceremonial opening.

Tours were organised throughout the morning showcasing our latest developments in plant, machinery, people and systems before speeches were made by Marcus Tiefenbrun and Dr Masahiko Mori (see caption right) to guests and workforce.

While the opening was a complete success, the weather was a complete disaster and although some of the press we hoped for were in attendance, we believe the rest were attending the opening of an Ark.

See Testimonials Page 4 See media coverage of event left. Since the opening , the company has experienced a mild slowdown. The lathe section is using the quieter spell to catch up on maintenance, whilst milling has kept relatively busy.

the most part, this slowdown has been alleviated by the company's market flexibility and responsiveness which has attracted a substantial amount of new business. While things may seem quieter than usual



Marcus Tiefenbrun (left ,MD Castle Precision) shaking hands with Masahiko Mori (right, President of the Mori Machine Tool Company).

The slowdown which has affected all parts of industry, combined with the all resources required to integrate all the new technology into the company has had an inevitable impact on the first half of the year. For now, with the amount of work in the pipeline, the mildness and shortness of this downturn and our preparations for the upturn: as things stand, 2010 and beyond looks to be very encouraging for Castle Precision.

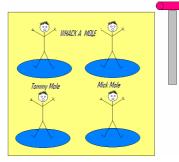
# I CAN SEE CLEARLY NOW THE CRANES HAVE GONE, I CAN HEAR ALL THE OBSTACLES IN MY WAY.

Yes, for those of you who have been following, we have finally come to the end of a 12 month refurbishment and build programme. However, the only problem is, with all the building and refurbishing work that has gone on, we're having a little trouble with the names. With the new toolroom next door, the old toolroom now new, and the new building now having a new extension. Not only is new the new word of the day but also quite confusing. Tannoying someone to the new building tends to result in several different locations and a long walk later.



## WHACK A MOLE

.Living with our builders generally threw up a recurring theme in that nothing went quite to plan, it always took longer than we expected but we were always happy with the result. At least they got the important bit right, which I am sure the inhabitants of the new projects and refurbished quality offices, will agree. With the quality team having moved into refurbished office the previously owned bv projects, the department has now been centralised into one location. Projects



move, which is now under the management of Tommy Grassie, has allowed the department to expand to eight with the introduction of Phil Dray and Jack Hazard. The move into a bigger office has also allowed the department to see each other again; working from behind their twin 30 inch screens in the previous office meant the engineers were hidden behind the massive screens and had to pop up and down to see if anyone else was in the room, or if they had just been talking to themselves for the last 30 minutes.

Class 1000 clean room is designed to limit particles to 1000 per cubic foot of air.

#### HOW CLEAN IS YOUR ROOM?

As part of an overall effort to becoming a one stop shop for our customers, Castle is looking to install a class 1000 clean room in the re-furbished 241 building. A clean room, as you know, is simply a controlled environment, the "Class 1000" and pertains to the number of particulates per cubic foot

of air. A typical office contains between 500,000 and 1,000,000 particles per cubic foot of air and a Class 1000 clean room is designed to limit particles to 1000 over the same measure. The facility will some of service the assembly requirements of one of our defence customers and at 12.5m

long and 4.2m wide, the  $52.5m^2$  room will be able to accommodate most requirements for specialist test equipment as well.



#### SHORT NEWS

New personnel. With the capabilities increased provided by our 5 axis solutions, millturn, large capacity vertical grinder, sub-micron and spline measurement and hopefully soon to be clean room assembly; Castle is looking to increase its customer base within aerospace and defence contractors. With that in mind. Castle has taken on a new salesman. Michael McKenna. Coming from an aerospace background and with an engineering history, Michael should have no

problems fitting in with our technical sales team.

Everybody smile. Yes its not quite "cheeeese", but time and changes have finally caught up with us and so a new brochure is in the pipeline. Much of the photographic work has now been completed and my thanks go to everybody for your patience and help. Expect new brochures early 2010.

Friendly grudge match. Every year the workforce hosts the annual football match between the men and boys. The general theme of the match is that the men are smarter but slower and rely on kicking lumps out the youth and the boys run round like crazy and try not to get thumped. The 2009 fall game finished 8-3 to the apprentices. Not

that the men are sore loser's or anything, but the apprentices have been put on cleaning duty from now until the end of their time.



### TRAIN TO GAIN

Over the last 6 months, Castle has been analyzing. adjusting and improving the apprenticeship training scheme. With new training facilities on the shop floor, training software, classes being run in house, and significant changes to the way the Level 2 and HNC are delivered, Castle is endeavouring to improve its long running training scheme. One of the major developments is the introduction of verifier assessors across every section of the factory. These engineers will be part mentor and technical source, and part assessor for the Level 3 the apprentices require to complete their modern apprenticeship. The new training facility itself will initially house a Mori Seiki Duraturn and Duravertical with room for expansion. The facility will allow the trainee's to experience everything they will see on the shop

floor on a smaller scale and in а supervised environment. This will work as a stepping stone from college, to а production manufacturing environment as well as honing and fine

tuning skills of apprentices who are already out in the factory. As part of a balanced training regime Castle is utilizing its Tooling University software to run classes on everything from sintering to the chemical makeup of different cutting fluids.



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#### GEARING UP

For the last eight months, Castle and Mori Seiki have been working in partnership to develop a unique hobbing capability for our NT series millturns. With the tooling and cutting cycles finished and





entire kit is being shipped across the world for development and test cuts on the NT5400 machine in our new facility. Development and updates to follow over the winter months.

#### Vill Somvone Turn On Zeh Leitz.

Castle has recently taken delivery of a new, Leitz PMM-C 700UHA Co-ordinate Precision Measuring Machine, quite the title. The machine, now situated in our dedicated controlled temperature standards room, is one of the most accurate CMM's in the country, with a measurement tolerance of 0.6 microns volumetric. While the measurement envelope is 1200 by 1000 by 700, the machine has shown in recent tests that across a 300mm box envelope, accuracies of 0.4 microns could be achieved. By that measurement you can pretty much call yourself whatever you like. As well as operating as a normal CMM, the machine is part of our overall strategy spline for manufacture and measurement. As well as usually requiring dedicated

splining machines, splines also usually require a dedicated measuring machine; given the case, the Leitz offers Castle the capability with flexibility. During the install however, the machine suffered from a freak glitch and after just two days the Leitz went out, which begged the how question; manv German engineers does it take to turn on the Leitz?



#### AUDIT SUCCESS

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The problem with this particular waste is that 90% of the processed material will simply be water On the 20th of October, Castle received an audit from Eaton Aerospace; the company passed achieving a quality audit score of 90% and an environmental and health & safety score of 80%. This allows Castle

to do business with Eaton worldwide, and potentially deal with 27 different companies.

Our Rolls-Royce scorecard for the month of September

Came in at 100% quality, 86% delivery; while the month of October came in at 100% quality and 91% delivery. Congratulations to everybody in the company on the above quality scores.

#### ENVIRONMENT

In an ongoing effort to reducing our environmental impact, the company has introduced a number of measure's to eliminate waste. We now operate a lights out policy on the shopfloor during all breaks and lunch periods and our integrated production control system and DNC system has negated the requirements for multiple drawings on the shop floor for some time now. However, our most recent focus has been on waste water. The majority of coolants used in the factory are a water oil mix and, depending on the

application: milling, grinding; they turning, require between 3% and 8% oil. Some of this ends up on the floors and then inevitably the floor washing fluid waste will contain trace amounts of which oil. must be processed even if it is a percentage of a percentage. The problem with this particular waste is that 90% of the processed material will simply be water, with the rest being predominantly cleaning solution and then finally trace amounts of oil. The solution will be part of the new bund outside the

Goods Inwards. Along with the floor washing fluid waste, all the other waste oil and water caught in the bund will be pumped out of an underground tank and into an evaporator. The evaporator uses temperature and pressure to separate out the water constituent, which will then be recycled for use during floor washing. The final waste constituent will be a reduced concentrate that will then go for processing. This solution will not only be more environmentally friendly, but will also significantly reduce our oil processing requirements

#### THE LAST TESTIMONIALS

With the recent opening of the factory, we have been literally inundated with a thank you.

I think the day was a real success and to see Castle leading and setting the standards for others to follow especially in the UK is amazing.

Dan Mistry, Fusion and Industry Manager UKAEA

It was a most enjoyable occasion and you can certainly feel very proud of the success of the event. Everyone I spoke to was highly impressed by the level of expertise which was on show, and the various members of staff were ideal ambassadors for the occasion.

Dr Peter T Hughes OBE FREng, Scottish Engineering Chief Executive. Many thanks to you for your hospitality and the chance to witness the opening of the world class machining facility you have created, you should be justly proud of your achievement and vision to invest in state of the art technology and machines during a period of recession.

Ian Watson ADS Director

