



At a recent awards ceremony, Contour Premium Aircraft Seating won 1st place in the coveted IT in Manufacturing category for its professional and successful implementation of a production planning and scheduling system in conjunction with a major Lean initiative. The company prides itself on a proactive approach across all areas in ensuring it achieves the best it can, and the area of maintenance is no exception. With 70% of all components manufactured in-house, including 90% of all metal items for the manufacture approximately 200 premium seating assemblies, that means a lot



of maintenance to manage. Overseeing this task is the responsibility of the maintenance

department managed by **Nic Goddard**.

## It all started with a Meccano set

**M&E:** Nic, thanks for talking to Maintenance and Engineering. Where did your interest in engineering come from?

**GD:** NG: I suppose it all started when I was about 8 years of age when one Christmas my brothers and I had a joint present of a Meccano set. This was followed by taking my Gran's iron apart and, later, a toaster which would not pop up - it never worked at all after I tried to fix it! I also worked on a spin dryer, where key parts disappeared into an abyss, never to see the light of day again.

**M&E:** How did you move from this to your current role within Contour Premium Aircraft Seating?

**NG:** My first job in the engineering/manufacturing sector was as a maintenance electrician in a factory making components for bicycles, with various machine tools such as auto-capstans, manual

and CNC lathes, vertical and horizontal mills of the manual and semi-automatic production type. Over the last 25 years within this industry I have had varying roles, mainly in sub-contract machine shops, but also in the aerospace and automotive sectors. These have ranged from CNC programmer, contractor CNC programmer/method engineer, to Works Manager and company Managing Director. I returned to a maintenance role within Contour Premium Aircraft Seating based in Cwmbran, South Wales after joining the company four years ago as a production engineer. After being with Contour for a few months I was asked if I would like to head up the maintenance department and add my extensive experience to supporting this area within the business.

**M&E:** Who were the key influences on your career development? Is there one person or event that stands out in your mind which helped you realise the importance of maintenance within a manufacturing/engineering company - if so, why and how did this affect you?

**NG:** Firstly my wife, who has constantly supported my decisions over the years - especially through the bad times when there were a few occasions that redundancy impacted. She has encouraged me to pursue my goals and ambitions to achieve a successful career. Secondly, during my childhood, my brother could not let go of the fridge door handle when he was electrocuted as a result of burnt wiring and a detached earth. Luckily this was not fatal but it was serious enough to make me appreciate the importance of maintaining all equipment - especially within a manufacturing/engineering environment.

**M&E:** How would you sum up your own personal vision for maintenance and developing a maintenance strategy?

**NG:** My personal vision is: "To provide both an effective and efficient service to the maintenance department's customers." This can be achieved by having an effective maintenance programme strategy and ensuring that a prompt response is made to all work requirements and requests, and minimising downtime in order that manufacturing is able to maximise the utilisation of available plant and machinery at all times.

**M&E:** In your experience, what are the current trends in maintenance and the role of maintenance within an organisation and how have these changed over the past decade or so?

**NG:** Currently there is a lot of "buzz" about vibration analysis; this has an obvious role to play within manufacturing. It can give a far earlier indication of potential bearing failure in moving pieces of equipment. Local heat source and thermal imaging monitoring & analysis are other useful work tools. Local TPM (Total Productive Maintenance) program development, where operators undertake minor regular, routine tasks, also plays a vital part in ensuring that plant and machinery is maintained at optimum. There are, of course, more methods than these and every company has its own view on which best suits its own needs.



**M&E:** *Generally speaking, what role do you see maintenance playing in the future in terms of overall importance to organisations/companies etc?*

**NG:** Ultimately if organisations/companies have a robust strategy then, theoretically, they should never have any breakdowns to deal with. This would result in the achievement of optimum full production at all times. However, in order to attain this, a

maintenance department can only be successful if PPM (Planned Preventive Maintenance) takes place as and when it is scheduled to do so.

**M&E:** *What is the role of maintenance within Contour Premium Aircraft Seating?*

**NG:** Maintenance within Contour over recent years has had a difficult time, in as much that it has struggled to keep up with the rapid growth of the business. Firstly, the Seats assembly factory was opened about 8 years ago in Cwmbran. Since then, about 5 years ago, the seats Manufacturing Unit (MU) was transferred from Camberley in Surrey. This was followed by an extensive expansion,



over the last 3 years, in the MU. For example, the machine shop department alone in the MU has almost doubled in size and currently has 47 CNC machines, plus several semi-automatic and manual machines. This has resulted in maintenance becoming more of a fire-fighting department. Undoubtedly, we are not unique in this; we are not the first, nor will we be the last, to experience this and, like others before, we have to find ways to rise to the challenge, resolve the issues and overcome the adversity.

**M&E:** *What are the key maintenance challenges within the company and how are these being overcome?*

**NG:** The main challenge is to develop positive pro-active plans to achieve success as a department through inter-action at all levels within the business. To achieve this, key machinery has been identified, where a plan is currently being put in place to extend PPM so that, eventually, all plant and machinery is covered. We have also started running workshops and have begun to implement TPM on all plant and machinery.

**M&E:** *What are the biggest obstacles to you overcoming these?*

**NG:** Having adequate resources and finding extra funding to cover the additional costs in providing PPM and implementing TPM throughout. Raising the awareness of the importance of TPM and how, in most cases, it's simple actions that have the most significant positive effect.



**M&E:** *To what extent does IT play a part in your maintenance strategy?*

**NG:** Recently we have introduced software that will assist greatly in the management of PPM. In a year or so, this should start to provide meaningful historical data that can be analysed to assist in the decision making process to plan a strategy for future development and investment within the business.

**M&E:** *Much is made of the need to incorporate maintenance at a board room level so it is seen as an integral component of the overall running and success of any organisation. How do companies achieve this?*

**NG:** How much is made of this depends on individual companies and their stance. Maintenance in any industry is only one element of an integral process. If, for example, maintenance is stretched, you need to manage the constraint. There is much written about this by Eliyahu Goldratt in a number of publications covering the Theory of Constraints (TOC). This can be summed up thus: Identify constraints, set the goals and how to achieve them, follow this through and use it as part of an ongoing process to continually improve, adapt and change.

**M&E:** *What would you want your contribution to have been at Contour Premium Aircraft Seating?*

**NG:** To provide a legacy of simple, effective, relatively low-cost measures which can provide long-lasting solutions that prevent costly breakdowns and lost production time. This will assist the continual growth and success of the company.

**M&E:** *Lastly, if you had 10 minutes with every manufacturing/engineering MD in the country, what 3 general items of advice would you want to share with them about the role of maintenance in their company?*

**NG:** First, listen to your work force. They have a wealth of knowledge that is generally overlooked and, more often than not, will give you the solution, if not immediately, then in a very short space of time. Rather than taking a chance that can prove needlessly expensive, by simply going to your work force and asking "what is your opinion or how do you think this can be resolved?", you will be amazed at the results.

Secondly, do not look at maintenance as a necessary evil. It needs to be part of the success process, just as it is vital to have well orchestrated production schedules. The same goes for PPM. Well maintained equipment will be more reliable, less prone to breakdowns and provide consistent results with optimum performance.

Finally, implement the thorough training of your workforce and have good housekeeping policies throughout. In particular, the thorough cleaning of machines is not something that only needs to be done when machinery is due for scheduled maintenance or when it breaks down, it needs to be done frequently. More often than not, breakdowns occur because machinery is not being maintained thoroughly enough at frequent intervals. There is nothing more disheartening for a maintenance team member, than having to go back and re-repair a machine, only to find that it is as a result of neglect from the operator, and that it could have been avoided by implementing better training and a higher standard of house keeping. ✨