



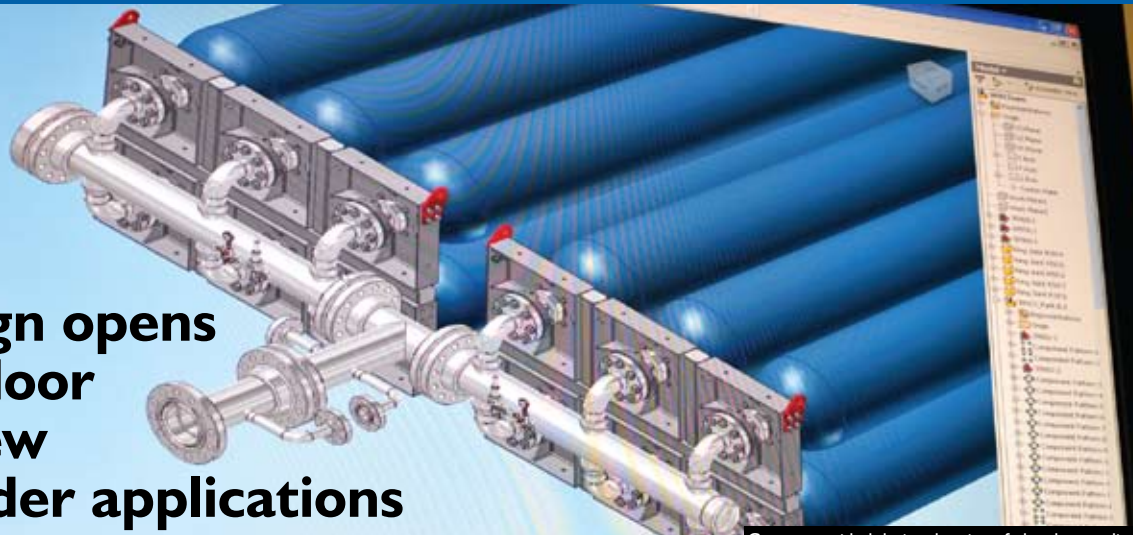
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## CHESTERFIELD SPECIAL CYLINDERS

CONTINUING OVER A CENTURY OF INNOVATION IN HIGH PRESSURE CYLINDERS

### Design opens the door to new cylinder applications

- systems modelling clinches Indian aerospace facility contract



Computer-aided design drawing of ultra-large cylinder set with a special manifold, produced by Chesterfield Special Cylinders Ltd for NAL, India.

**Unusual applications for our cylinders are always of interest to us. But it is by no means essential that we know their end use, provided the specification or cylinder code is clear. However, when the design expertise of Chesterfield Special Cylinders Limited is required, we get to understand more of the set-up into which our cylinders will be built. Design can be the key to winning the order.**

Just such a process was necessary in securing a contract from one of the premier civilian laboratories in India.

The technical and scientific heart of India is Bangalore - home of the National Aerospace Laboratories (NAL), currently celebrating their 50th year. NAL provides civilian aeronautical research and has made very significant contributions to all Indian aerospace programmes. Its R & D work related to civilian aerospace applications is undertaken to support the projects of many industries, government institutions and laboratories, including multi-agency collaborative projects and international contracts.

When NAL needed to augment the existing combustor test facility to carry out pure experimental research work, it gave CSC the opportunity to provide the expertise to meet NAL's requirement for a high pressure air storage facility of 30,000 litres water capacity. Air at 200 bar will be routed through pipelines to feed the different research test systems during the experimental research work which may

include combustors and turbo-machinery.

The air storage system is one of the key sub-systems in such a test facility. Providing 559mm diameter ultra-large cylinders was only the start of the job, as the specific needs of this project were realized through co-operation in the aspects of design.

The manufacture and testing of the 12-cylinder pack, with large fixed pipe manifolds at each end (shown in the illustration), posed some challenges in terms of build-space and handling. But, more importantly, we had to find practical engineering solutions to enable the pack to be completely knocked down and then built back up in Bangalore, whilst exactly reproducing the positioning of all components. Even a tiny amount of variation on the connecting flange faces may give rise to troublesome leaks and, with each section weighing 23 tons, delicate movement in millimeters becomes a very big issue.

Our design team fully utilized updated CAD software, to enable a smooth process of review by customer, with subsequent automated transfer to our supply chain management for purchasing and manufacturing.

The whole process so far has epitomized the Chesterfield ethos - high quality, bespoke engineered solutions to provide efficient pressure technology, coupled with high levels of customer service. The local liaison of Mr S. Krishnamurthi of our Indian representatives, Corus International (see panel below), has been key in ensuring the process runs as smoothly as possible.

#### Agent profile: INDIA - Corus International (India) Pvt.

An enduring relationship which has survived ownership and name changes (for both parties) and immense shifts in engineering markets - that aptly describes the link between Chesterfield Special Cylinders and our representatives on the Indian sub-continent.

Corus International (India) Pvt. operates as Chesterfield's front-line liaison in India from its offices New Delhi, Mumbai and Chennai. Headed by Daryus Shroff in the Mumbai HQ, the team comprises S Krishnamurthi, K Palange and C Parameswaren - or SK, Kailash and CP, as they are more familiarly known.

The relationship between the companies was formed in the 1970's and early 80's when Chesterfield was briefly part of the British Steel Corporation, of which Corus subsequently became owners. The organisation markets the Corus Group's special steels and pre-formed steel products in India.

In the latter years of the last century, large numbers of industrial cylinders were supplied to India from Chesterfield. Today, the emphasis in the Indian market is for ultra-large cylinders for the booming Indian aerospace industry - see main story - and for the naval and commercial shipbuilding sectors.

"The commitment for supporting Chesterfield's sales in India was natural", says Daryus Shroff. "Dealing with Corus' specialized operations (and, at times, with very high levels of demand for gas containment) works naturally together for us. Products are now as specialised as the customers are demanding. The support we give in liaising on the ground is key to our joint successes in India." Understanding of Indian ways of commerce and Indian government methodologies is needed, as well as support from a dedicated team. We are glad that team is Corus India.

*'continued overleaf'*

## Preactor and the preactress.

In the last year, the company introduced a new production planning system, running on a software programme. Its name is Preactor.

In this issue we are introducing the new Production Planner/Scheduler running the system.

Her name is Gail Johnson.

The programme is much more than an internal production control system. It has a number of benefits to our customers:

- as its name suggests, Preactor is designed to anticipate problems before they become ... well, problems. It identifies production bottlenecks and operational areas which are not following the production plan, to ensure the promised delivery dates are achieved
- the planning tools also allow Gail to give a speedy update of the progress of any particular order and its planned despatch date. This can be



Gail Johnson

communicated directly to the customer, either in the form of regular updates in a delivery plan, or via the sales team

- for new orders and those still in the tendering and quotation process, Preactor enables the sales team to quote more accurate lead times, based on the current and forward work load

- the system also enables Gail to see whether an order can be re-scheduled to an earlier or later date, without jeopardising the planned delivery dates of other orders.

Already we are getting positive feedback from customers (and our sales managers) about the value of the information provided. But for all customers, whether aware of it or not, Preactor is working away from hour to hour as a hidden contributor to the efficiency of the Chesterfield service.

Gail arrived to act in the newly created role to run this important part of the day-to-day operations of our complex manufacturing set-up.

Among her many qualifications, which demonstrate her suitability for the job, are the BTEC National Diploma in Mechanical & Production Engineering, an NVQ in Business Improvement Techniques and RSA I in Communications in Business and Computers in Data Processing.

In her previous employment, Gail has worked as a Metallurgical Technician, a Quality Assurance Engineer and a Logistics Manager. She joined Chesterfield Special Cylinders from a company distributing machinery and spare parts for garden and lawncare products, where she was the Buyer and Stock Controller.

Having spent her week in front of a computer display, it is perhaps unsurprising that Gail lists an array of alarming outdoor pursuits among her interests, including motorcycle rallying and mountain walking.

We expect they need careful planning too.

## Help for Heroes... and others

The company's Charity Donations Committee continued its work during 2008, once again supporting a wide variety of deserving causes.

Each month a regular fund is donated by the company and allocated by the Committee, members of which are drawn from all parts of the business.

The current team is Lee Lawrence, David Chapman, Paddy Harvey, Dave Walker, Peter Davey and Dominique Mountford.

Organisations that have been supported ranged from well-known national charities, such as the 'BBC Children in Need Appeal' and the Anthony Nolan Trust, to local fund-raisers, such as the Multiple Sclerosis Therapy Centre in Sheffield. From time to time, local junior groups also benefit. Chesterfield Town under-9s football team got some help with new kit.

The cause receiving the largest single donation from the

committee during the year is one that seems to have captured the public's awareness and concern in great measure lately.

'Help for Heroes' was launched only in October 2007

to raise £6 million to build a much needed swimming pool and gym complex to assist in the rehabilitation of service personnel wounded in recent and on-going conflicts. The new complex will be built at Headley Court, the tri-service rehabilitation centre in Surrey.

Yet, such has been the public recognition of this need that this non-political appeal has so far raised over £22 million, enabling the budget for the swimming pool to be raised to £8 million and a further £3.6 million given to 'Combat Stress' - a parallel charity set up to help start treating the mental wounds suffered on active service sooner than later.

For more information on the 'Help for Heroes' project, see the web site at: [www.helpforheroes.org.uk](http://www.helpforheroes.org.uk)



At Christmas, Chesterfield Special Cylinders also undertook a corporate sponsorship in support of the Royal Air Forces Association (RAFA).

The occasion was the Association's first-ever national carol concert, arranged as part of the series of events to celebrate 90 years of the Royal Air Force. The 'Carols by Candlelight' concert filled Peterborough Cathedral with 800 invited guests and members of the public who purchased tickets in support of the charitable services of RAFA.

Chesterfield has had a very long association with the RAF. The company supplied aircrew breathing cylinders for the renowned 'Spitfire' in the Second World War. Today, aircraft cylinders continue to be a consistent part of our business, specified for fitting on the latest airframes including the Joint Strike Fighter (JSF), the Hawk - the RAF's principal fast jet trainer - and the Saab Gripen. Hundreds of our cylinders also return to pass through our retesting and refurbishment facilities when mandatory retesting or refits become due.

In this context, it seemed appropriate to offer more public support for RAFA in the welfare work they provide for currently serving and former RAF service personnel.

'NAL India, continued from front page'

"Working with Chesterfield Special Cylinders Ltd has been a positive experience and their credentials have been supported by the co-operation we have had so far", said Mr M. Baskaran, Project Scientist at NAL's Nilakantan Wind Tunnel Centre. "CAD models of the system have helped us visualize the issues we were facing and helped in resolving them quicker. Chesterfield has supported this project to ensure the fit-up on-site is as smooth as it could be. We are looking forward to a simple commissioning process".

NAL's engineers are to visit to our Sheffield plant for the Factory Acceptance Test. Future business with NAL is a possibility, as expansion ports have been included in the design at the customer's request.

If you would like to read past issues of the Chesterfield Newsletter, you can access them via our web site at [www.chesterfieldcylinders.com/news](http://www.chesterfieldcylinders.com/news)

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Telephone: +44 (0) 114 242 7500 Fax: +44 (0) 114 242 7501



A Pressure Technologies group company

