ISSUE 6 // SPRING 2009

MRC REVIEW //

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MRC Project for Orchid Chemicals Wins "Facility of the Year" Award

MRC would like to congratulate Orchid Chemicals for winning a prestigious **Facility of the Year Award from ISPE, INTERPHEX and Pharmaceutical Processing Magazine.**

MRC are very happy to have played a part in the design and construction of Orchid's state-of-the-art facility located in Aurangabad, India and are grateful for the recognition we have received from Mr Vijay S Padalkar (pictured left) and Orchid regarding our contribution to their success.

These awards recognise the innovation and creativity utilised by manufacturing facilities serving the healthcare industry and spotlight the commitment and dedication of individuals in companies worldwide to innovate and advance pharmaceutical manufacturing technology.

To accommodate their growing number of development products Orchid Chemicals created their new facility with modern and flexible cGMP aspects to manufacture internationally acceptable products.

The Carbapenem Production Facility consists of four production blocks contained in cleanrooms designed, manufactured and installed by MRC.

In close collaboration with MRC Systems, Orchid successfully completed a sizeable, fast-track project to meet market demand using a combination of innovative engineering concepts and state-of-the-art equipment. Being able to accomplish these goals, while increasing their productivity was one of the reasons for their selection for this award. We would like to thank Orchid for their continued business and wish them every success for future projects.

ISPE Annual Conference - Mumbai, April 2009

On 13th and 14th April 2009 ISPE India will be holding their annual conference on the subject of PQLI & Quality Management. MRC will be exhibiting at the event and delivering a paper on methods of cleanroom construction. The conference will be held at the Hotel Hyatt Regency in Mumbai and we hope to see you there.

Installation near completion at Pannon Pharma

In May 2008 MRC signed a contract with Pannon Pharma for the supply and installation of a cleanroom at Pecsvarad in Hungary. This 277 m^2 cleanroom facility for eye drop and ointment filling is entering the final stages of construction and has already attracted a lot of attention from other pharmaceutical manufacturers in the region.

MRC is grateful to Mr Pallos and Dr Blazic for opening their sites to so many visitors from these companies and MRC and Pannon Pharma are working hard to achieve completion in April of this year.

Inside:

PROJECTS//

BioGeneric Pharma Build State-of-the-Art Facility

MRC are nearing completion on the detailed design for a state-of-the-art manufacturing facility in Ramadan Industrial City near Cairo, Egypt for BioGeneric Pharma.

MRC have recently signed a contract for the construction of this facility which will manufacture liquid and lyophilised vial products. With product manufactured for international markets, the plant is designed in accordance with the cGMP guidelines issued by the EC and FDA.

The facility consists of a number of buildings (production, administration, laboratories, warehouses, utilities and site security) constructed on a plot of land of approximately 19,500 m^2 with a total covered area of approximately 4000 m^2 built on 4 levels.

MRC expect to complete this important project for BioGeneric Pharma by the middle of 2010.

RAFARM Project Complete

RAFARM was founded in 1974 to develop and manufacture pharmaceutical products for human use. During the following decades it included in its activities the licensing of innovative pharmaceutical products through collaborations with international companies. These collaborations have provided RAFARM with the expertise to make them a leader amongst Greek pharmaceutical companies.

In February of this year MRC completed work on a facility for RAFARM which will be used to produce opthalmic and injectable products aseptically in 5ml vials and 5ml ampoules.

The facility is designed to comply with the latest cGMP requirements and RAFARM are looking to extend their portfolio to contract manufacture for companies within and outside the EU market.

MRC would like to thank RAFARM and in particular Ms Joanna Rassia (pictured here) for choosing MRC for this project and are grateful to them for allowing us access to the facility with visitors from the industry.

We also wish to acknowledge the great help and support we have received from our local agent, Dimtech, throughout the project.

Wyeth Remodelling

The extension to and remodelling work on an MRC cleanroom built for Wyeth in 1992 in Taiwan is nearing completion.

New MRC panels now stand side-by-side with old to form a new cleanroom and the "old" panels are indistinguishable from the newly produced ones, having clearly stood the test of time!

MRC wishes it's friends at Wyeth continued success with this cleanroom and the best of luck with the recent merger with Pfizer, another valued customer of MRC.

Key Project for UCL

MRC are currently working on a key project for UCL for their Institute of Neurology, Queen Square, London.

The project commenced in March and is for a Cat 3 containment facility.

This is the third Cat 3 project that MRC have carried out for UCL and the planned completion date is April.

PROJECTS//

Meditop Commission Booths and Doors

MRC are pleased to be supplying and installing a dispensary booth and pharmaceutical doors for Meditop, whose plant is located at Pilisborosjeno, northwest of Budapest in Hungary.

The doors and booth form part of an improvement programme that Meditop has recently started in their facility.

We would like to thank Dr Acs for choosing MRC to support Meditop with their important programme.

Sterile Cleanroom for Yemen Egyptian Pharma

In 2008 MRC commenced work for new sterile cleanroom facilities for Yemen Egyptian Pharma in Sana'a, Yemen.

The project is progressing well and some of the activities currently taking place on site are shown here.

First MRC Latvian Project

In May 2008 MRC signed an important contract with RRB Celtnieciba in Riga, Latvia.

RRB provides qualitative and professional implementation of construction projects in Latvia.

This, the first MRC project in Latvia, was for the design and construction of doors and transfer hatches for a cleanroom to be used for tissue culturing at the Paula Stradiņa klīniskās universitātes in Riga.

The project was completed and handed over to the university in January 2009.

MRC Signs Polish Agent

In December 2008, within the historic 100 year old Grand Hotel in Lodz, MRC Systems and Grupa PharmaTech Sp.zoo.o signed an agreement to co-operate on sales and marketing for the Polish pharmaceutical market.

Grupa PharmaTech Sp.zoo.o brings over 10 years of pharmaceutical experience within the Polish market and expects to introduce MRC Systems' cleanroom products and services to key Polish customers. We are confident that this will help establish MRC Systems in the the growing Polish pharmaceutical market which will be serviced from the MRC factory in Hungary as it currently does for the Balkan and Baltic states.

Already this co-operation has resulted in a large enquiry from a strategic Polish client and we both look forward to more opportunities for mutual co-operation in the very near future.

PROJECTS//

Zydus Cadila Installs Biotech Vaccine Facility

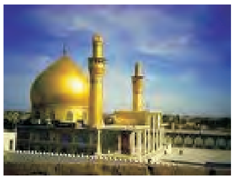
Zydus Cadila is an innovative global pharmaceutical company that discovers, develops, manufactures and markets a broad range of healthcare products.

MRC recently worked with Cadila on the supply and installation of a 1000 m² biotech vaccine facility in Ahmedabad, India.

The facility consists of one production building where the raw materials (chicken's eggs) are received and processed to produce vaccines. It has been designed according to the FDA and cGMP standards.

The project was handed over to Cadila last December and is now in trial production. Cadila plan to serve the market from this facility within 2009.

Construction Continues for Arabio



Construction of a cleanroom for vaccine production for Arabio in Mecca is nearing completion.

The images below reflect how construction is progressing and with a team on-site from MRC Dubai and local contractors we look forward to handing over this project to our valued customer, Arabio, later this year.

Project Completion for Abbott, Ireland

MRC have recently completed work on a project for Abbott Laboratories in Ireland. The project consisted of an additional manufacturing and processing suite which was added on to a facility that had been designed and built by MRC in 2005.

Work was completed at the end of January and Project Manager at Abbott, Seamus Harris is delighted with the result.

MODULAR ROOM CONSTRUCTION MRC

MRC NEWS//

MRC and The Environment

In recent years there has been much greater emphasis put on designing and constructing buildings in a green and sustainable way. The construction industry uses a vast amount of natural resources and produces huge quantities of waste. The industry recognises that this cannot continue indefinitely without causing irreversible damage to the environment.

New minimum levels of performance have been introduced across a number of key issues including;

Energy Efficiency / Co2
Water Efficiency
Waste Management
Use of Materials
Life Span of Buildings

At MRC we carried out an internal study into the performance of our GRP modular wall and ceiling systems and it's impact on the environment.

The MRC GRP System

The MRC GRP system is a composite product manufactured in a hand lay-up process in which woven glass fibres are impregnated with resin inside a mould and then left to cure at atmospheric pressure and room temperature.

Using the life cycle assessment (LCA) produced by The Building Research Establishment (BRE) for their "Green Guide to Composites" our GRP system achieves the **Summary Rating of B.**

The BRE Green Guide to Composites

B	Summary Rating
A	Climate Change
A	Fossil Fuel Depletion
A	Ozone
B	Human Toxicity
D	Waste Disposal
A	Water Extraction
A	Acid Deposition
A	Eco Toxicity
A	Eutrophication
B	Summer Smog
D	Minerals Extraction
B	Risk Score

This guide gives products A-E ratings based on the level of environmental impact they have with an A rating given to products with minimal impact.

Energy

The production processes for plastics from crude oil to fabricated materials are much less labour and energy intensive than those required for the production of steel and aluminium, the two other materials used in cleanroom construction. Energy requirements for the production of steel is 13.9 $kWhkg^{-1}$ and of aluminium 74.1 $kWhkg^{-1}$ compared to 3.1 $kWhkg^{-1}$ for GRP.

Moulding

In addition, our panels are made from liquid polymers in a mould as outlined earlier. This eliminates all forming and joining procedures involved in making the final product, achieving more energy savings.

Durability

Durability is another factor influencing the degree of environmental impact a product has. Extending the life of the cleanroom panels is another important way by which energy conservation can be achieved. MRC cleanrooms have been in continuous use for the last 30 years. Metal based systems rarely last more than 5 years and only with a very high level of maintenance, consuming more energy in the process.

What about plastic waste?

It has long been suggested that non-biodegradability of plastics could present a problem in the long term disposal of products made from plastics. This may be so in some cases but not in the case of the MRC panels which can be dismantled, cleaned, repaired and reused. We have successfully done this for a number of customers who wanted to relocate their cleanrooms or who have sold them to a third party.

The MRC GRP system *is* the green way to build cleanrooms. This, combined with its clear advantages over other cleanroom construction methods, make it the system of choice for many pharmaceutical manufacturers worldwide.

MODULAR ROOM CONSTRUCTION MRC

MRC EVENTS//

ISPE, UK

The annual ISPE UK awards dinner was held in Harrogate last November and MRC were there to take part.

The conference, entitled "Quality by Design" focused on the business of developing, manufacturing and marketing of pharmaceuticals.

This year the ISPE Annual UK event will take place at Stratford-upon-Avon on 26th November and the title of the conference will be "Success Through Manufacturing Innovation".

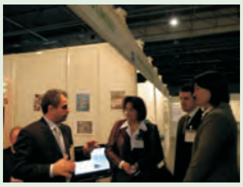
We look forward to taking part in the event and to meeting up with our industry friends once again.

Indian Pharmaceutical Congress, New Delhi

MRC took part in December 2008 in the 60th IPC event at the Netaji Subhas Institute of Technology in New Delhi.

It is the most prestigious annual event of the Indian pharmaceutical industry and is an opportunity for pharmaceutical companies in the region to showcase their capabilities and services. It attracted 8000 business visitors including CEOs and top executives and proved to be an excellent way for MRC to meet up with their most important regional customers.

Polish PharmTECH Congress, Warsaw



February 2009 saw MRC taking part in one of the definitive events for pharmaceutical players working within Eastern Europe and it proved to be an excellent event to share best practices, gather market intelligence and to develop our business within the region. MRC had a large stand at the congress and the event was an excellent opportunity to catch up with customers and business colleagues.

MRC have already agreed to take part in PharmTECH 2010 which will take place in Budapest on 17th and 18th of February 2010.

We look forward to seeing you there!

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