



# Development of innovative medical implant technology

Client: DePuy CMW

Location: UK

Value: n/a

## Background

DePuy CMW approached ABB Engineering Services to assist in developing a new and innovative medical implant technology. DePuy CMW had demonstrated the concept in laboratory conditions, but required assistance to prove the concept would scale up to a robust manufacturing environment. ABB brought a specification led project process, a thorough understanding of the production requirements, and specialist engineering resource to the project.

ABB worked with DePuy CMW to advance their existing proof of concept to an automated laboratory facility capable of producing representative test pieces over ten times faster than with previous facilities. This permitted greatly accelerated specification and performance development, resulting in faster progress to the final product specification.

DePuy CMW selected ABB Engineering Services for our proven approach to this type of project, our sector knowledge and both breadth and depth of expertise.

## Benefits

- Access to range of functional engineering expertise
- Process design, cost estimating, planning and specification of proposed manufacturing process
- Acceleration of laboratory development process leading to
  - Increased efficiency
  - Increased consistency
  - Greater confidence and certainty over robustness of proposed solutions
- Significantly lower costs over traditional approach

## Solution

ABB facilitated a structured workshop process with the DePuy CMW team to clarify the project objectives, timescales and success factors. This workshop process led to a project plan and outline specification.

An integrated project team was formed consisting of DePuy CMW specialists, ABB project management consultants and specialist engineers, and DePuy CMW business representatives. This team could call on ABB specialists as necessary in disciplines such as safety engineering, materials sciences, production engineering and validation in a timely and effective manner.

ABB consultants developed the outline specification into a detailed product and production specification, which was populated by the integrated project team as the product development process progressed.

In parallel with the product specification, ABB worked with DePuy business personnel to establish the likely market, scale and timing requirements for production and consequential effects on site inventory handling, effluent impact, and raw material handling issues. Where necessary, ABB initiated and progressed safety and management of change procedures within the DePuy CMW management system.

ABB produced an outline process diagram, infrastructure requirements, cost estimates and timescales to allow the project to progress to the next phase of capital investment.

Following the initial phase of specification and process development, ABB secured the contract to develop, specify and procure the automated laboratory test equipment necessary to progress the project. ABB managed the integration, installation, commissioning and testing of the equipment, working within DePuy CMW's project process for procurement, management of change, safety and regulatory compliance. A full training and documentation pack was produced. Installation was completed to budget, on time and without incident.

ABB were able to use our contacts in both the academic and production environment to identify potential technologies and suppliers not previously considered. In particular, the use of an automation partner previously more familiar with engineering test equipment for high quality applications such as testing parts for Formula1 cars brought considerable savings to the project.

Following commissioning and handover, the automated laboratory equipment has been in constant use, providing an efficient and consistent environment for formulation development.

#### Other services used:

- Project management and planning
- Process consultancy
- Change management consultancy
- Safety engineering
- Validation
- Materials sciences
- Process engineering
- Automation engineering
- Commissioning

## Real world experience at your fingertips!

ABB delivers leading edge guidance and global services in asset management and operations improvement. We deliver, improve, assure and maintain the performance of our clients' manufacturing operations and associated infrastructure, managing all the technical, process, operational and regulatory problems to optimise manufacturing and project performance, output and profit.

- Improving business and supply chain performance
- Improving regulatory performance and compliance
- Improving variable cost performance
- Increasing operational competitiveness
- Optimising asset base

Our in-house capabilities mean that our clients benefit from a uniquely comprehensive range of services relevant to their needs, all from one company.

ABB Automation Technologies division serves the automotive, cement, chemical, distribution, electronics, food and beverage, life sciences, marine, metals, mining, paper, petroleum, printing and telecommunications industries with application-specific power and automation technology. The division has strong domain expertise to create Industrial IT-enabled products and services for its customers in these industries.

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