

# JRI Joint Replacement Instrumentation Ltd.

## case study

For the demanding needs of medical joint replacement part degreasing, UK-based JRI specified Trichloroethylene degreasing solvent in a SAFECEM supported process



Orthopaedic manufacturer Joint Replacement Instrumentation Ltd (JRI), whose headquarters are located in the centre of London, UK, has specified Trichloroethylene for manufacturing part degreasing using a closed loop solvent delivery system, stabilizers and rigorous testing protocol provided by SAFECEM Europe.

### Changing regulations drive degreasing process reassessment

Since 1970, JRI has supplied high quality orthopaedic joint replacement prostheses to the medical community. These demanding applications require removal of oils and polishing compounds that are applied during manufacturing.



Evolving regulatory requirements over the last five years caused JRI to evaluate a range of degreasing systems. In 2002, when Trichloroethylene was reclassified, JRI switched to a formulation of n-Propyl Bromide (nPB), which was then viewed as a safer alternative. Used in open degreaser equipment, this approach initially satisfied JRI's needs. However, reassessment was motivated with both tightening Environmental Legislation, and particularly the re-classification of nPB in 2005 to an R60, which placed it in the same category as Trichloroethylene.

### New equipment results in a closed loop delivery system

JRI identified vapour degreasing as most consistently producing effective results and specified new hermetically sealed solvent degreasing system technology. Through a series of successful trials, JRI purchased a Gigant machine from EVT GmbH of Sternenfels, Germany. „Having worked with SAFECEM from the beginning, JRI's decision to adopt the SAFE-TAINER™ closed loop solvent delivery system was an easy one. For us this system ensures the safe and



sustainable use of chlorinated solvents and gives us a support on our solvent degreasing“ added John Spooner.

In addition to SER compliance, the sealed technology reduces specific health and safety risks of exposure associated with solvents, allowing respecification of their preferred solvent Trichloroethylene. SAFECEM supported solvent testing and stabilization early in the evaluation process through a series of oil compatibility tests. These tests resulted in defining SAFECEM's MAXISTAB™ stabilizer as the preferred option.

JRI implemented regular atmospheric monitoring and internal awareness measures to ensure on-going quality and compliance.

The manufacturing plant, completed in 2007, now meets JRI's stringent specifications for both degreasing results and environmental, health and safety compliance.

JRI limited has its' head office in London whilst the manufacturing and customer services is located in Sheffield. JRI offers a rapid delivery service to all customers world-wide. The JRI instrument and prosthetic loan system is increasingly popular and assists our new customers to become familiar with any surgical procedure at low cost. Forty percent of the total Company business is export with world wide distribution. JRI's manufacturing unit in Sheffield is staffed by men and women from the heart of the highly skilled British Steel industry, and is also equipped with the most modern computerised CNC machinery and measuring technology. This ensures the high quality of implants and instruments on which hospitals and surgeons alike have come to depend.

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