

Case Study: e2v

Oncology equipment manufacturer gains excellent cleaning process results using new cleaning system with chlorinated solvents supported by SAFECEM



To meet stringent cleaning demands required for the production of components used in Oncology equipment, the consistent high quality of chlorinated hydrocarbons (CHCs) proved irreplaceable when supported by SAFECEM's solvent technology and rigorous testing protocols.

In search of alternative cleaning processes

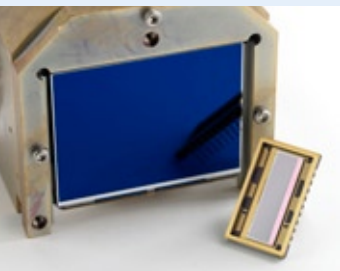
For many manufacturers, reclassification of Trichloroethylene in 2002, in addition to Solvent Emissions Regulations (SER, 2004), motivated reassessment of their cleaning processes.

When UK based e2v, manufacturer of specialist components and sub-systems, decided to source a replacement cleaning process for its existing Trichloroethylene degreasing unit, it set out to entirely replace CHCs. This represented a special challenge because e2v had decades of success using a finely-tuned system of Trichloroethylene solvent and water to remove up to 100 different oils and lubricants.

e2v embarked on a broad evaluation and series of trials in aqueous chemistry, hydrocarbons, fluorinated chemistry including co-solvents, and newer technologies such as Dry Ice and Ozone. Results were compared to benchmarks including contact angle/water wetting and surface analysis such as SEM/EDX.

New equipment, solvents and testing approaches keep CHCs on the possibility list

When the alternative cleaning processes did not completely address surface and blind hole cleaning, e2v's machine technology supplier IB Industries (UK) encouraged the company to reconsider CHCs and specifically DOWPER™ MC Perchloroethylene solvent in a Höckh vacuum technology cleaning system.



DOWPER™ MC, provided by SAFECEM Europe, met health and safety demands for substitution of Trichloroethylene. The outstanding range of mechanical possibilities of Höckh equipment added a new dimension to the cleaning process. Oil compatibility tests defined optimum conditions for operation.

On-going testing ensures excellent results

In October 2006, a new Höckh plant was installed in e2v's Chelmsford facility. The plant ran a 12-month life test to confirm the new process would give no degradation in life performance of the critical demands on their products. Now, closely following the SAFECEM regime of weekly solvent tests, e2v ensures that the solvent is maintained in prime condition.

Says John Lodge, Chemical Technology Manager, "The significant benefits we gained from this new system include improved health and safety, SER compliance, a more consistent primary cleaning regime and consistent quality. We achieve these results in about the same time cycle as with the old open top equipment."

e2v is a leading designer, developer and manufacturer of specialised components and subsystems, falling within two product groups: electronic tubes, and sensors and semiconductors. These products enable some of the world's leading OEMs to deliver innovative systems for medical and science, aerospace and defence, and commercial and industrial applications. e2v's magnetrons and compact modulators are found in medical therapy equipment such as linear accelerators in, radiotherapy machines used for cancer treatment.

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