



CASE STUDY

ASSESSING ELECTROMAGNETIC FIELD EXPOSURE IN A COMPLEX DRINKS PRODUCTION FACILITY

CLIENT: CONFIDENTIAL

LOCATION: UK

THE CHALLENGE

The client is a major operator within the drinks manufacturing and bottling sector, managing several large-scale production facilities across the UK. Their operations rely heavily on high-voltage and high-current electrical equipment, including bottling lines, automated conveyors, industrial mixers, and refrigeration systems. While essential to production, this type of equipment can generate significant electromagnetic fields (EMF), some of which may exceed recommended exposure thresholds if not properly assessed and controlled.

Under the Control of Electromagnetic Fields at Work Regulations 2016 (CEMFAW), employers are legally required to identify EMF emission sources and ensure that exposure levels remain within the prescribed limits. The client recognised the need to demonstrate compliance across their estate and proactively manage any risks to employees, particularly those with medical implants or heightened sensitivity to EMF.



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To support this objective, the client engaged Arthian to carry out a comprehensive EMF risk assessment at one of their key manufacturing sites. The aim was to establish a clear understanding of EMF exposure levels, identify any areas of concern, and develop a practical action plan to ensure full compliance with CEMFAW.

THE SOLUTION



Arthian conducted a focused on-site assessment, beginning with a detailed review of all equipment and processes that could act as potential EMF emission sources. Using calibrated, industry-recognised measurement instruments, our specialists measured the magnetic flux density associated with each identified item of equipment. This included both intentional emitters and incidental sources arising from high-current electrical systems.

Each measurement was then compared against the CEMFAW Action Levels and the EU Council Recommendation reference levels. Where readings exceeded the relevant thresholds, Arthian carried out a full risk assessment to evaluate the potential impact on workers, with particular attention given to employees at particular risk — such as those with active or passive implanted medical devices, body-worn medical devices, or pregnant workers.

Following the assessment, Arthian produced a clear, evidence-based report outlining the findings and providing a tailored action plan. This plan included practical recommendations to reduce EMF exposure, improve site controls, and strengthen ongoing compliance with CEMFAW. The client now has a robust understanding of their EMF profile and a structured pathway to ensure a safe working environment for all employees.



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