

Case Study Title: Ergonomics Assessment of Lead Manufacturing

Background: Heavy manual tasks were being conducted at a lead manufacturing facility. A comprehensive ergonomic review was commissioned to reduce the risk of musculoskeletal injury to operatives.

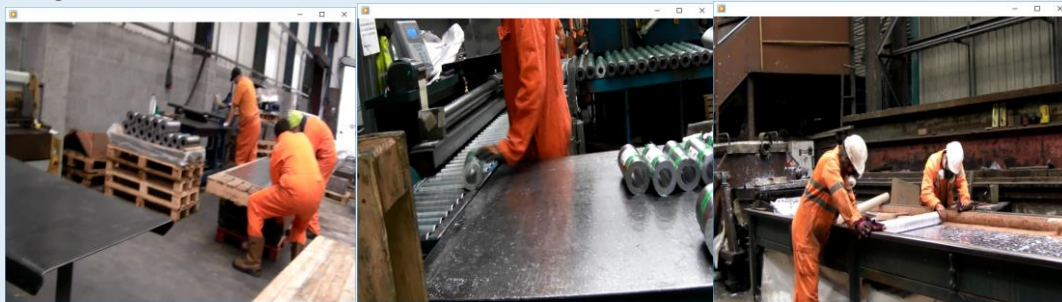
The processes at the plant were largely manual and there was not much automation in place.

The weight of the product (lead) was significant as well as the number of items that were handled by each operative.

Ergonomic Approach Taken:

- Our chartered ergonomist conducted a field ergonomics trial to survey and observe the tasks being conducted
- Tasks were observed
- The operation of the various bits of machinery was assessed
- Weights of the different product types was collected as well as the frequencies
- Push / pull forces were collected using force gauges
- Subjective feedback from a range of operatives was collected

Images



Analysis Methods:

- Expert ergonomics appraisal by chartered ergonomist
- MAC (Manual Handling Assessment Charts)
- ART (Assessment of Repetitive Tasks)
- Pushing and pulling force data and comparison with guidance

Outputs:

- A detailed ergonomic report was compiled with supporting images of postures observed
- Recommendations were provided for each of the tasks conducted
- Risk Assessment ratings using MAC, ART etc. were provided
- A bespoke training programme was developed to reduce the risk of musculoskeletal disorders through better manual handling techniques

Impact

- Better lifting and handling techniques were implemented successfully by operatives
- Reduction in injury rates
- Better equipment implemented to reduce manual element of tasks
- Training programme developed
- Human factors review conducted to reduce COMAH risks