SUMMARY

Universal Metal Company Limited is primarily concerned with the manufacture of Metal office furniture. These include desks, chairs, filing cabinets, cupboards, bookcases, credenzas, lockers, and tables. The Company is also involved in the manufacture of Dexion angles and shelves, welded wire mesh and chain link fencing wire. The Company carries a wide range of expensive plant and equipment in its fixed assets. These include guillotines, hydraulic presses, mechanical presses, roll formers, power saws, mig welders, spot (resistance) welders, arc welders, an electrostatic paint plant, a wire drawing machine, a multiple spot welder, a wire coiler unit, overhead cranes, chain link weaving machines, forklifts, compressors and standby generators.

At present there is no preventative maintenance. Machines are repaired only when they are brokendown. The aim of this report is to develop a comprehensive maintenance plan for Universal Metal Company Limited for all the machines in the plant. In order to accomplish this all available failure, repair and failure cost data were analysed and all equipment identified and classified in relation to their role in the production process and their criticalness to plant operations.

The maintenance plan developed was in three parts.

1) A system for handling breakdowns or emergency maintenance
2) A preventative maintenance (PM) programme.
3) A system for collecting information to anticipate the occurrence of breakdowns so that the PM programme could be updated.

Some of the recommendations included:

1) Implementation of the maintenance plan developed in this report (without hiring any additional staff in the maintenance department) in one production department at a time.
2) Regular classroom sessions with the maintenance department for feedback and monitoring the success of the implementation.
3) Continuing contracting out the jobs that are beyond the scope of the technicians on staff.

It was found that the average total cost of breakdowns was around six hundred thousand dollars ($600,000.00) per year. It is estimated that the plan developed in this report will reduce this cost to a maximum of three hundred thousand dollars ($300,000.00) per year, with no additional output from the company bar the cost of developing the plan.