

# Report of Installation at Turgolev in Bursa, Turkey in March 2005

## Savings >12% Payback <18 Months

Turgolev is a medium sized pressed metal forming company with a specialisation in automotive components, primary customers being Rolls Royce and Jaguar cars. The application chosen for the EnviroStart installation was selected as it has one of the hardest duty cycles of all of the press machines on site as it is forming high pressure dome components for the air suspension of the current Rolls Royce cars.



**The Press Tooling Showing the Formed Components**

The EnviroStart was fitted to the primary hydraulic motor drive which is the largest consumer on the Press. The existing Star-Delta start contactors were taken out of circuit and the EnviroStart fitted after the line contactor with the motor switching being retained off an auxiliary contactor on the Delta contactor. (See photograph over page).

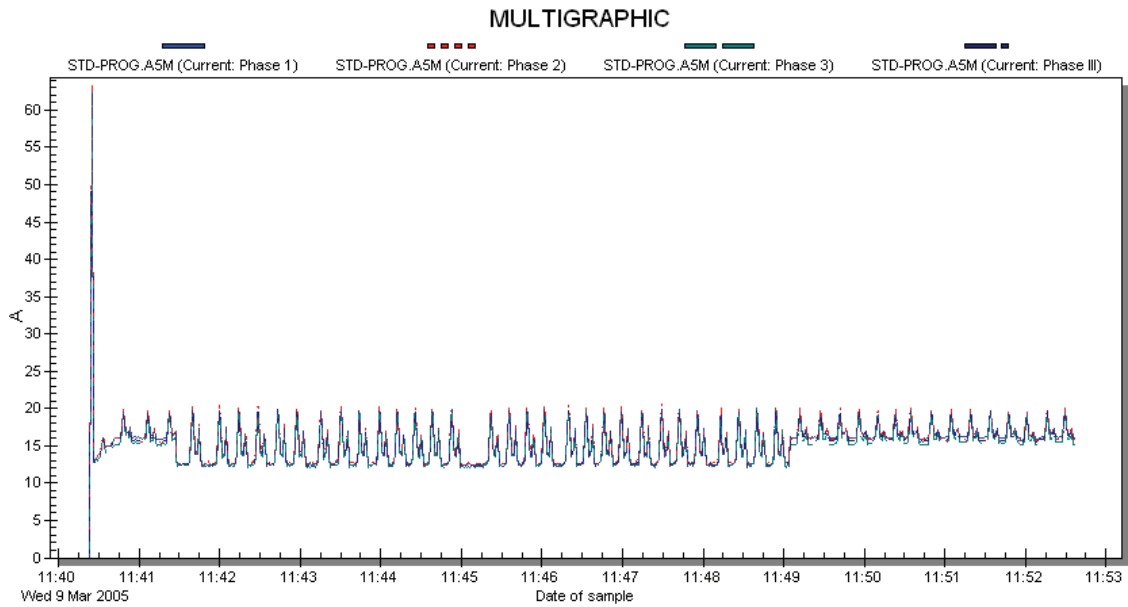


Because of the duty cycle of the system in operation it is less easy to see the direct savings however it is clear from the graphs over page that the power levels when the system is off load are significantly lower than they were prior to the fitting of EnviroStart. The specific savings per cycle were in the order of 28% which when amortised over the total operational period gave savings of greater than 12% which with the local energy costs gave a payback of less than 18 months.

The graphs also demonstrate that even with fast rise time applications such as presses the EnviroStart reacts fast enough to meet the  $dV/dt$  and  $dI/dt$  requirements of the motor including the heavy duty cycling as the press tool forms the dome of the component being manufactured.

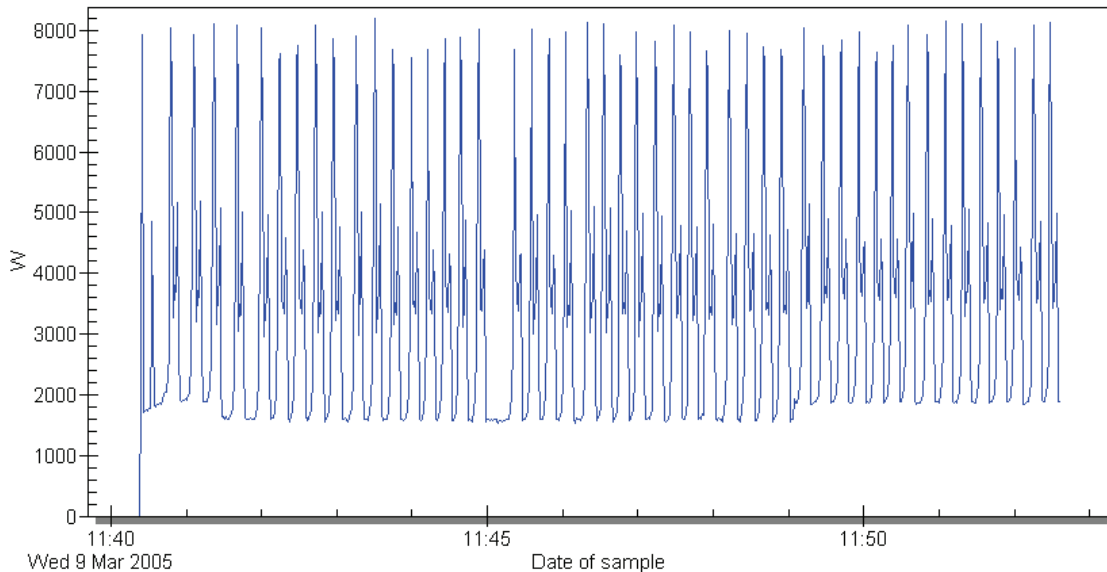
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Selected Variable: STD-PROG.A5M (Current: Phase 1)

### STD-PROG.A5M (Active power: Phase III +)



**EnviroStart Within the  
Control Cabinet of the Press  
Mounted Immediately Above  
the Star Delta and Line  
Contactors**

**Report compiled by  
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