



INTERNAL REPORT
AIR INTAKE BELLMOUTH RELINING
GT1&2
SSE, KEADBY POWER STATION
May – September 2012

INTRODUCTION

The tender called for the preparation and relining of the Bellmouth of both GTs and the floor underneath the Bellmouth as well as the floor and roof of the Silencer section in the air intake ducting at Keadby Power Station.

For this work we initially agreed to carrying out the preparation on the Bellmouth using plastic blast media and using Dry Ice Blasting for the Silencer work. However the plastic media blasting was not successful and we had to resort to using garnet grit blasting to get a suitably clean surface with a profile on the Bellmouths. The Bellmouths had not been coated since new in 1996. However some touch up work was carried out on the Silencers where accessible. (See Picture 1)



Picture 1 – Bellmouth prior to coating



Picture 2 – Bellmouth after grit blasting

PREPARATION

The change in preparation specification meant we had to redo the GT2 Bellmouth as the coating, that was initially applied, was peeling off. This was found to be where there was oil contamination of the casing that the plastic media had not been able to remove.

Changing to a coarse grade garnet ensured that the oil contamination was removed and a profile of a minimum of 75 microns was achieved. (See picture 2). Note the boarding sealing the air intake side of the Bellmouth from the turbine compressor. Additional protective sheeting was required on the acoustic cladding to the Bellmouth surround.



After grit blasting and cleaning up the Bellmouth by vacuuming and wiping down with acetone the Bellmouth was coated with a single coat of CHEMCO Epo – chem RS 500P to a film thickness of approximately 100 microns. (See pictures 3 & 4) followed by a single coat of CHEMCO Epo – chem RA 500M to a film thickness of 200 – 250 microns, thus giving a total film thickness of approximately 300 – 350 microns. (See picture 5 & 6).



Picture 3 – Stripe coating RS 500P



Picture 4 – completed coating RS 500P



Picture 5 – completed topcoat RA 500M



Picture 6 – Completed topcoat RA 500M