

MEDIA RELEASE

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Boiler for historic Locomotive 3801 overhaul heads to Germany for refit

A boiler manufactured in Germany for the overhaul of historic NSW steam locomotive 3801 left Australia yesterday on its way back to Europe for major rectification work.

Office of Rail Heritage Director Marianne Hammerton said German company Dampfkloswerk Meiningen, a division of Deutsche Bahn (DB), won a contract from RailCorp in 2009 to build a new welded steel boiler in a competitive tender process.

“The boiler arrived at the overhaul workshop at Chullora in October 2010, and after a series of inspections involving the boiler inspector and an independent boiler expert, it became clear there were significant problems.

“Among the problems we discovered with the boiler was the position of the front tubeplate, localised out-of-roundness and peaking of some of the welded seams in the boiler barrel, as well as issues with the welding and stays in the firebox,” Ms Hammerton said.

“The scope of work to be carried out has been the subject of intensive but co-operative negotiations between RailCorp and DB.

“After a visit by DB representatives, contractual negotiations and a formal letter of non-compliance by RailCorp, DB agreed to undertake the necessary work at no cost to RailCorp.

“This will include complete replacement of the defective boiler barrel, shipping costs and visits by RailCorp’s technical representative at critical stages of the work,” she said.

Ms Hammerton said the boiler is expected to be returned to the Chullora workshop in 2012. The warranty conditions will apply following formal acceptance of the boiler.

Ms Hammerton said RailCorp shares the disappointment of the locomotive’s custodian, the NSW Rail Transport Museum, volunteers and supporters of locomotive 3801 that the boiler built as part of its overhaul was not fit for purpose.

Note to editors

Update of 3801 Mechanical Overhaul

In October 2010, in readiness for arrival of the new boiler, the engine frame had been placed back on the driving wheels, leading bogie and trailing truck. That milestone marked completion of extensive repairs to the engine frame, wheels and running gear during the major overhaul in the previous 18 months.

Removal of the boiler has freed up floor space at Chullora, and the volunteers have begun to locate and label the engine's streamlined framing, crinolines, casing and boiler clothing to enable a complete assessment of its condition for reconditioning, repair or replacement.

To date, a number of internal components of the self-cleaning smokebox (bulkheads, baffle plates) have been re-manufactured for re-fitting during the boiler mounting process.

Further repairs to the smokebox are needed, with some welding and plugging of minor holes to render it airtight again.

The smokebox interior is perhaps the most hostile environment anywhere on a steam locomotive, all its fittings being attacked by the flow of extremely hot, abrasive and corrosive exhaust.

The blast pipe (a steel casting) has already been sent to contractors to have the top flange weld-reclaimed and re-machined back to drawing dimensions. This will be followed by manufacturing a new exhaust nozzle and nozzle housing.

The famous "Maltese Cross-Bar Spreader" has suffered extensive erosion and is being reconditioned by skilled volunteers.

Some brackets attached to the inside of the smokebox have been cut out for reconditioning, and rust between mating surfaces has been removed. Angle iron supports which have eroded too far have been cut out and replacements are being bent up using traditional blacksmithing techniques.

The engine cab has been stripped of paint and filler, enabling some minor weld repairs and rust treatment. A section of the floor plate has been replaced and the plate has been treated with rust converter and metal primer. It will later have a new timber floor installed.

Brackets attaching the cab to the boiler have been removed, cleaned and straightened and some areas of the cab sides and spectacle plate have been

panel-beaten to remove dents and straighten twisted areas.

Design of the brackets and attachments to be fixed to the boiler to support the streamlining, boiler clothing, cab and running boards and other parts has begun.

The original brackets were attached by steam-tight studs screwed into the boiler barrel and firebox casing. The new boiler will have “doubling” plates welded to it at Chullora to which the various brackets will then be studded, facilitating later removal for maintenance as required.

RailCorp will continue to support the overhaul of locomotive 3801, and with other stakeholders looks forward to its expected return to service in 2013.

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