inclining experiment carried out on January 1934, 3 tons of cement ballast was added being placed in the accommodation space, engine and boiler rooms and after peak.

The acceptance trials took place on the 13th February 1935. A mean speed of 9.82 knots was attained at 134 rpm., 128 psi. boiler pressure and 287 I.H.P. This trial took place at Port Dennison - Bradley Head mile. (in use up to the war), in fresh conditions. The tug was at greater displacement (126 tons) than for the pervious trial and the bollard was slightly foul. Circling, anchoring, starting, stopping and astern trials were carried out. During the trials, the Garden Island crew took control and the vessel was handed over on completion of the trials.

In 1940, the "Wattle" was used for de-gaussing experiments in Fitzroy Dock, Cockatoo Island. When the diesel tugs 501 and 502 entered service in late 1968, the "Wattle" was laid up by the then owners, the Dept. of Navy.

Construction
Steel hull to Lloyds scantlings, upper deck wood over cabin, steel elsewhere.

Arrangement
Below decks- Fore peak (dry) FE Frame 41, chain locker frames 40-41, machinery space frames 8-30, store Aft frame 8, oil fuel tanks frames 20-27 port and starboard sides, reserve feed water tanks frames 28-30 port & starboard sides.
Upper deck- hand winch, mast, galley, cabin entrance, W.C., boiler casing, towing hook, engine room skylight, steam steering gear & hatch to store.
Bridge deck- wheelhouse & funnel

Machinery
Boiler: two furnace wet, back Scotch marine, oil fired, approximately 10' 9" diameter by 13' long.
Engine: two cylinder compound believed to be 13 3/4" X 31" X 30", with steam reversing gear, engine drives air, boiler feed and bilge pumps. Propeller, 7' 6" diam. X 9' 4" pitch.
Auxiliaries
Two horizontal Worthington fuel oil pumps with heater and hot and cold risers.
Auxiliary boiler feed pump.
Boiler feed injector.
Condenser with steam driven circulating pump.
110 volt, 1.5 Kw. General Electric dynamo driven by a fully enclosed vertical engine.
Duplex vertical fire and salvage pump. This was also the standby circulating pump.
Steam steering gear on the main deck abaft the engine room skylight and fitted after the vessel was completed.

Wattle" and "Bustler"
The "Wattle" is very similar to the "Bustler" (74 tons gross) completed on the 31st March, 1917 at Cockatoo Island. The design of the "Wattle" was based on the "Bustler". The "Wattle" being given increased dimensions and a slightly different arrangement. The "Wattle" is five feet longer, one foot wider and three inches deeper than the "Bustler". The "Bustler" was built with the cabin aft, with a trunk above the upper deck (as "Warrah") and a hold forward, whilst the "Wattle" has a small store aft and a cabin forward.

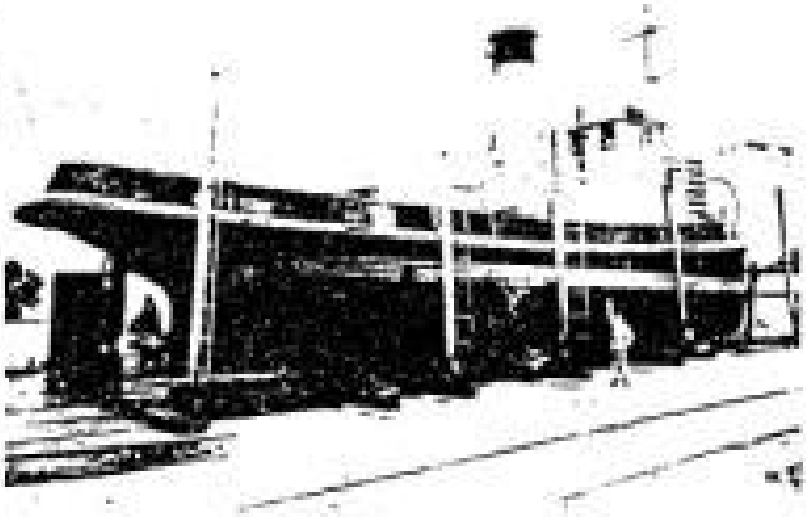
The "Wattle" boiler has been located further aft, closer to the engine and the engine room has been extended aft to accomodate the large fire and salvage pump abaft the engine. The galley and W.C. which were in separate houses built on the fore deck of the "Bustler" after completion, were arranged with the entrance to the cabin in the forward end of the superstructure of the "Wattle". To accommodate this, the bridge and wheelhouse were raised. Oil fuel tanks which were fitted to the "Wattle" in lieu of wing bunkers as in the "Bustler" which was coal fired. For comparison, the "Bustler" ran trials at a displacement of 127 tons developing 256 I.H.P. at 127 rpm. and attained a mean speed of 9.44 knots. *** Article and photos by Captain R.C. Hope Ormiston, Brisbane.

The "Wattle" is operating regularly and enquiries can be made at 'Melbourne's Excursion Steamer', North Wharf, Melbourne.

Below: The 'Wattle' on the Williamstown (Melbourne) slipway for survey in July 1988. The propeller is 7' 6" diameter with a 9' pitch. Maximum 113 rpm but usually runs around 85 or 90rpm giving a speed of around 8 knots and burning about 13 gallons of fuel per hour. Dick Hope photo.

Particulars

Length B.P.	78'
Length overall	87' 4 7/8"
Breadth moulded	17' 6"
Breadth extreme	18' 3/8"
Depth moulded	9'3"
Light condition	
Mean draught	6ft 6"
Freeboard	2ft 9"
Displacement	118 tons
G.M.	1ft 4"
Loaded condition (Light plus full fuel & water)	
Mean draught	7'4"
Freeboard	1'7"
Displacement	132 tons
G.M.	10"
Gross tonnage	99.88
Net tonnage	1.19
Oil fuel capacity	10 tons
Reserve feed tanks	4 tons
Fresh water (domestic)	1000 gals



Help
Black 6hp Austral engine?

My 6hp Austral featured in Jeff Hollys "K.Y.M." of the October issue is indeed original charcoal-grey (black). Jim Morgan assured me that to his knowledge, the only engines to leave the factory black, were special orders for Alfa-Laval in NSW and would have an Alfa-Laval nameplate. Perhaps an occasional one slipped through at the end of a run or used up the last of a can of paint.

There may be someone who can shed some more light on the subject of Austral colours.

I know of one engine that appears to have been originally blue! *** David Aitken, 'Linlithgow', Box 61, Seville, Vic. 3139

Victorian Steamship Association
Steam Tug "Wattle". A short history

By Captain R.C.Hope

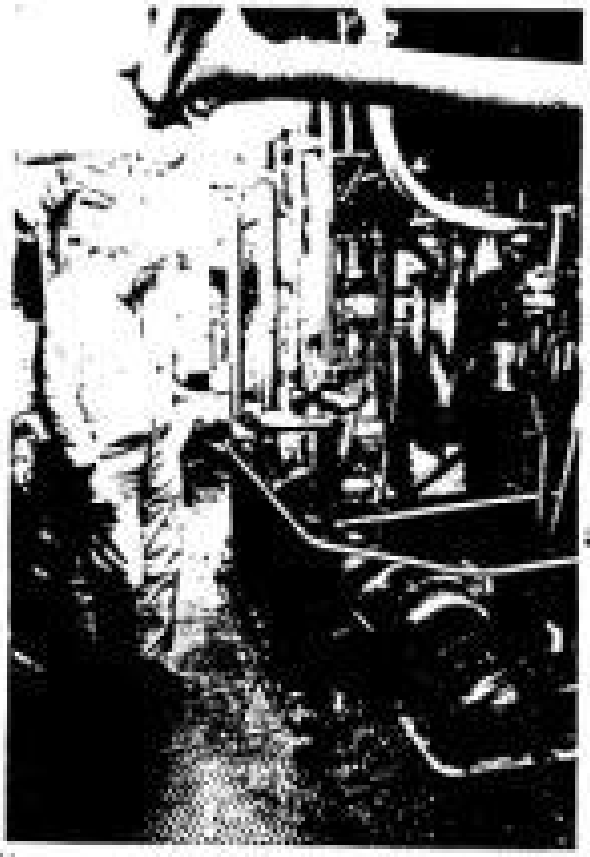
"Wattle" was built at Cockatoo Docks in 1932 - 1933 and was the last ship to be built there whilst the Island was under the control of the Commonwealth Shipping Board. Later it was leased to a private enterprise under the name of Cockatoo Docks and Engineering Co. Pty. Ltd.

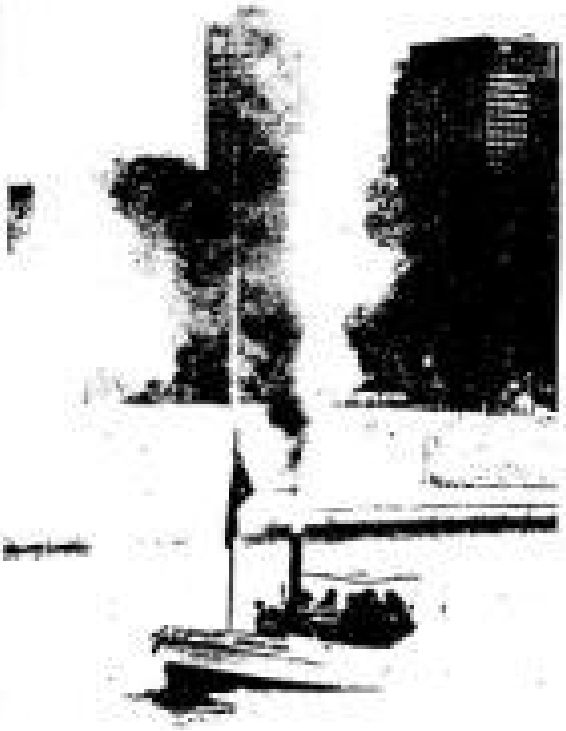
The tug was built as a speculative venture and given the name "Codock" during the construction and re-named the "Wattle" on handing over to Garden Island. The building of this tug enabled many of the Island's apprentices to be kept in employment when most of the Dockyard employees were only working one week in four. At that time, apprentices only worked six weeks out of seven and then had to make up for time lost to complete their apprenticeship.

Trials

On 27th June, 1933, the then "Codock" was lifted into the water by the crane Titan. With most work complete, wooden deck laid and most of the auxiliaries in place. The lifting weight was 55 tons.

The first trials took place on November 8th. A steam speed of 10.6 knots at 133 rpm. was reached with the tug in light conditions (118 tons) at the end of the trial. As a result of the





Top left: Steam tug 'Wattle' under steam on one of its regular marker outings on Port Phillip Bay, Melbourne.
Left: The Wattle's main engine working with Chief Lawrie Crooks attending. The wheel directly in front of Lawrie is the throttle and above that, the valve that allows live steam directly into the LP pressure cylinder to be used when the HP cylinder is stuck on top or bottom dead centre.
Above: The ex-naval 'African Queen' which came to a recent Melbourne boat show. I think she is steaming along the Yarra River, Melbourne.
Dick Hope photos.