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Gem State - T-ACS 2

Conversion of P 61x Mariner Class Cargo Ship casting by Terry Holtham 2013

As I have always wanted a crane ship (ACS), and in the course of my research found that three variations of crane ship were based on Mariner sub-types, the second conversion I did was Gem State T-ACS 2.

Gem State was a C4-S-1qa sub-type originally built for American President Lines (APL) by NASSCO in 1966 as the President Monroe (MARAD Hull No 166). In 1972 / 73 she and her sister ships were lengthened and converted into full container ships by Todd Shipyards, Seattle with a 105 foot section inserted just ahead of the bridge structure.

President Monroe was traded in to MARAD in 1979 and then leased back by APL until 1982 when she was returned to MARAD and laid up in the Reserve Fleet. In 1984 she was converted into a Crane Ship by Continental Marine, San Francisco and renamed Gem State designated T-ACS 2.

A little bit of imagination and some artistic modelling license is required in converting the Mariner Class castings, as noted in the article introducing my models. In this case, as I was not willing at the time to cut a Tri-ang Mariner model in half and insert a 1 inch (100ft) section, I lived with the original length and made a conversion which "looked" the part.

Preparations:

As before the model chosen was a Matson livery P611. The metal lifeboats and plastic masts were removed and the superstructure was unscrewed but in this case the funnel was left in position. Again the model was immersed in Blackfriars to strip the paint, using an old toothbrush to scrub the nooks & crannies, then brushed vigourously with a copper wire brush to polish the metal ready for filing and alterations.

I noted from the photographs of GEM STATE that the six huge cranes fitted to her were very similar to those fitted to ships of the USNS Bob Hope class and therefore sourced a set of six cranes from Mountford Miniatures who by chance produce kits of the USNS Bob Hope. I also noted, with some surprise, that the lifeboats were of the open type and these

were sourced from the bag of spares I had from Hansa. With the major items accounted for it was then just a case of filing, filling and additions in plasticard.

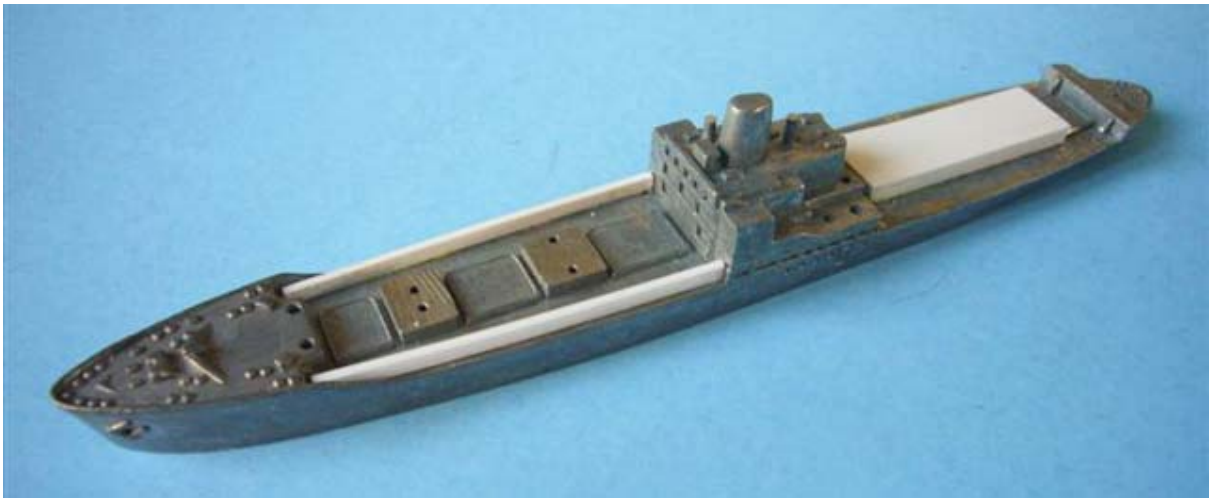
Modifications & Additions:

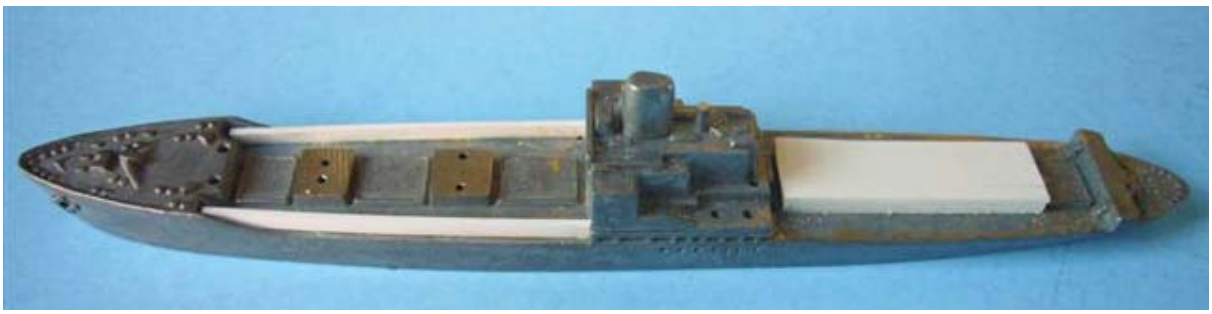
As the ship had been converted to a container ship the traditional mast houses were no longer fitted and larger hatches had been created to cater for containers so the first major task was to modify the main deck to look more like container hatches. At first I thought this would mean filing both the mast houses and hatches flush with the main deck but, after a close look at photos of Gem State, I noted that the container hatches were higher off the deck and almost full width forward and ¾ width aft and therefore it would only be necessary to file down the mast houses to an appropriate height.

On the aft deck, after a good heavy filing session with a ¾ inch wide cross cut file, I reduced the mast houses down to around the same level as the hatches themselves preserving the integrity of the after most hatch on the deck, which was left untouched. Once happy with the level of the aft deck I then fitted a rectangular frame of 1.5mm x 1.0mm plasticard section with the 1.5mm vertical. On the top of this was fixed a cut section of 0.5mm thick plasticard sheet to form the hatch covers and then small strips of 0.5mm square plasticard section were fitted to the vertical sides to give the effect of stiffeners.

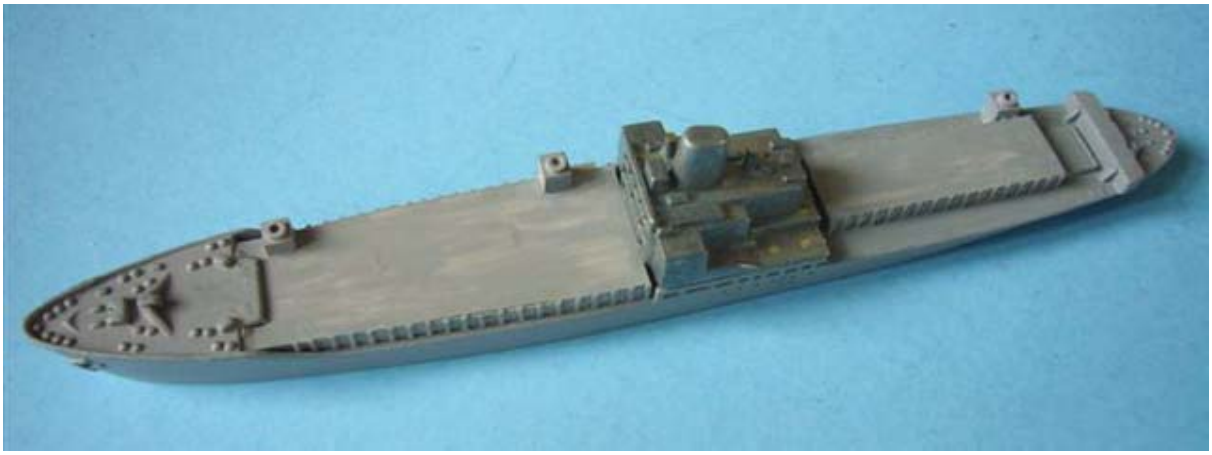
As the container deck on the forward part of the ship was almost full width I filed off the two projections on the deck just in front of the bridge structure (for the derricks) and filed the masts houses down to about 1.5 mm in height. This then allowed me to fit strips of 1.5mm x 1.0mm plasticard section down the deck just inboard of the deck edge as depicted in the photos below. The whole deck area between these strips was covered with a cut piece of 0.5mm thick plasticard sheet to form the forward deck area. As in the aft deck small strips of 0.5mm square plasticard section were glued to the outboard faces of the vertical sections to give the stiffener effect.

(This deck area included the two openings up to the forecastle which could just as easily have been filled in as on the Cape Gibson model thus creating a more rectangular deck shape to fit.)





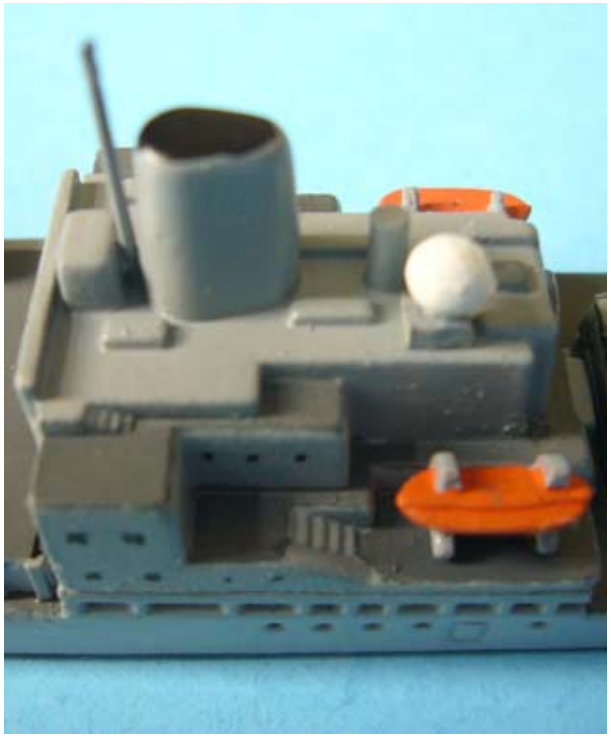
The next parts I made were the three crane pedestals – these from 4mm square plasticard section cut to the correct height. The aft one was glued to the deck outboard of the container deck but the forward pair were trimmed to fit on the outboard side and over the container deck as in the photo below. On the top of each one I fitted a slice of 2.5mm diameter plasticard tubing to give the crane ring effect. I then filled in the two remaining (derrick) holes on the forecastle and all the holes on the bridge superstructure with Milliput. The hull was then primed with a good coat of Humbrol 128 (US Compass Grey).



Whilst the hull was drying I prepared the superstructure painting it overall in Humbrol 128 then the decks with Humbrol 125 (US Dark Grey), the superstructure again with another coat of Humbrol 128, the funnel top in Humbrol 33 (Matt Black) and the lifeboats with Humbrol 82 (Matt Orange Lining).

The SATCOM dome was a hat pin head stuck onto a small square of plasticard and after painting glued to the deck. A short mast was made from 0.8mm diameter brass wire fitted ahead of the funnel and painted as for the superstructure. A small slice of white plasticard was left unpainted but glued to the top of the forward Triang mast fitting on the starboard side.

I used a fine black ink pen to fill in the window recesses and draw additional windows / portholes on the sides. When all had been varnished in Humbrol Satin Cote the lifeboats were glued on and the superstructure was then put aside until the hull was finished.

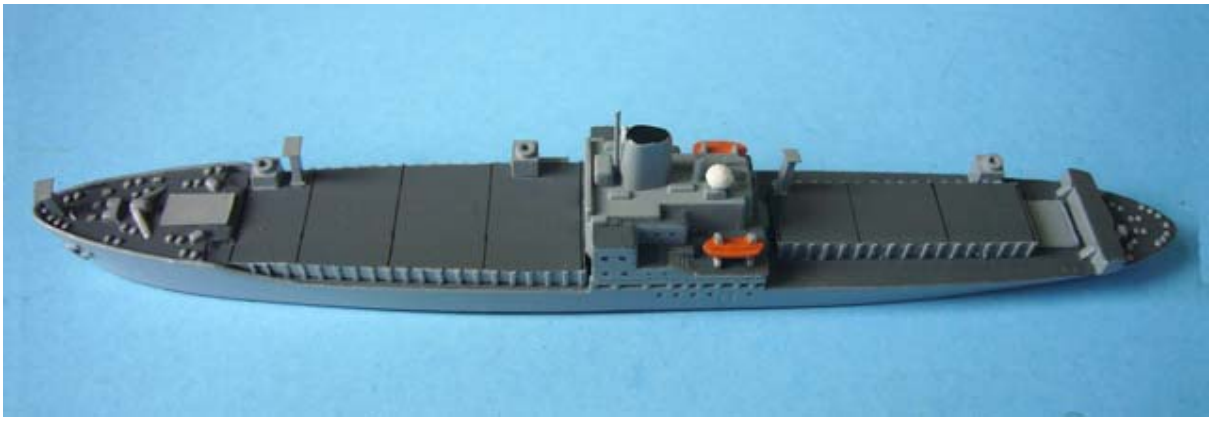


As noted previously the foredeck needs a cargo hatch so one was made from 0.5mm thick plasticard cut to shape (5mm wide and 6mm in length) and glued in place. The hull painting was then completed giving the decks two coats of Humbrol 125 and the deck fittings, sides of container decks and crane pedestals etc a second coat of Humbrol 128. Again I used a fine black ink pen to draw the lines delineating the container hatches. The hull was then given a further two coats of Humbrol 128 and a waterline was added in Humbrol 33 (Matt Black).

The six cranes from Mountford Miniatures were filed down and paired up then fitted onto pedestals made from 3.0mm x 3.00mm plasticard section glued together and filed into an oval shape. Once completed the cranes were painted in Humbrol 128 and varnished. I decided to display the aft pair of cranes in raised mode by simply bending the soft white

metal cranes at the base point. The crane wires, made from 0.45mm diameter brass wire, were then glued in place and painted Humbrol 33 (Matt Black).

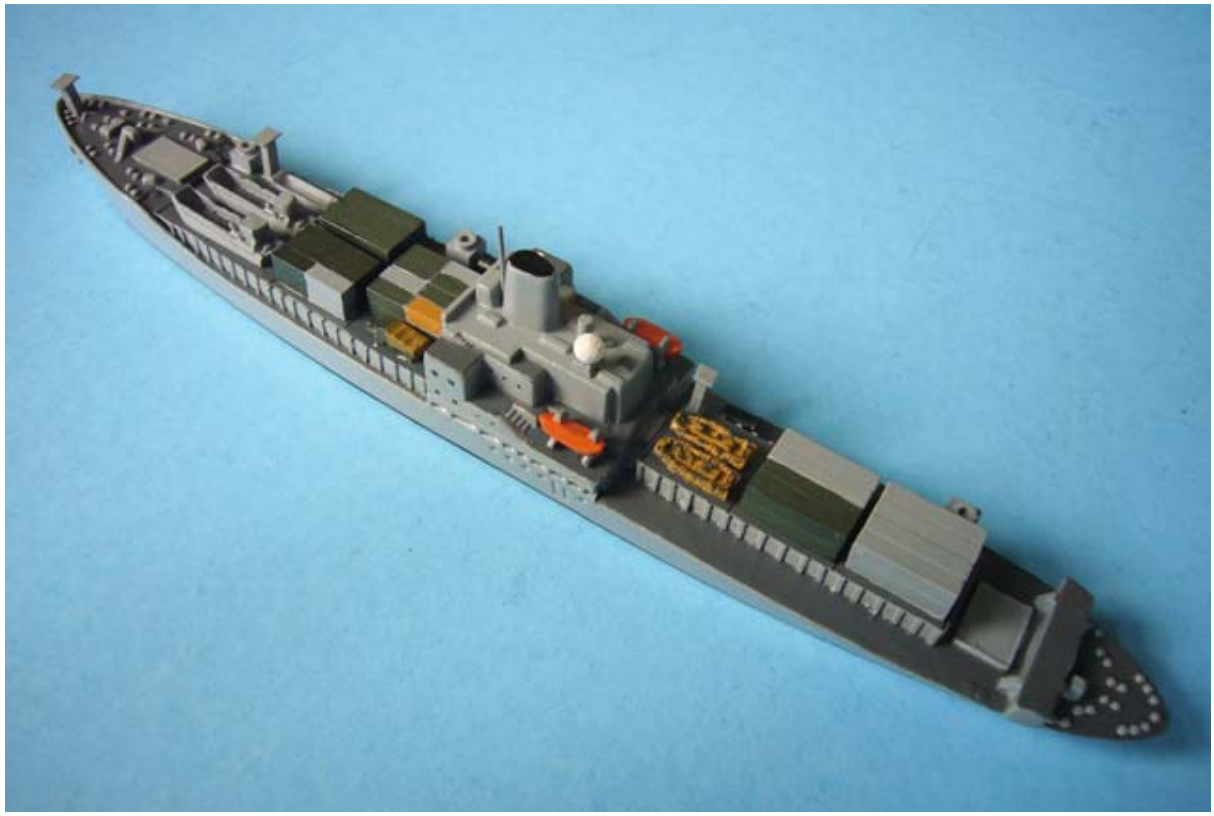
The three crane crutches were fabricated from 1.0mm x 0.5mm plasticard section with small pieces of 0.25mm thick plasticard for the bases and tops. These were painted up in Humbrol 128 and glued in place having the cranes to hand for exact positioning.



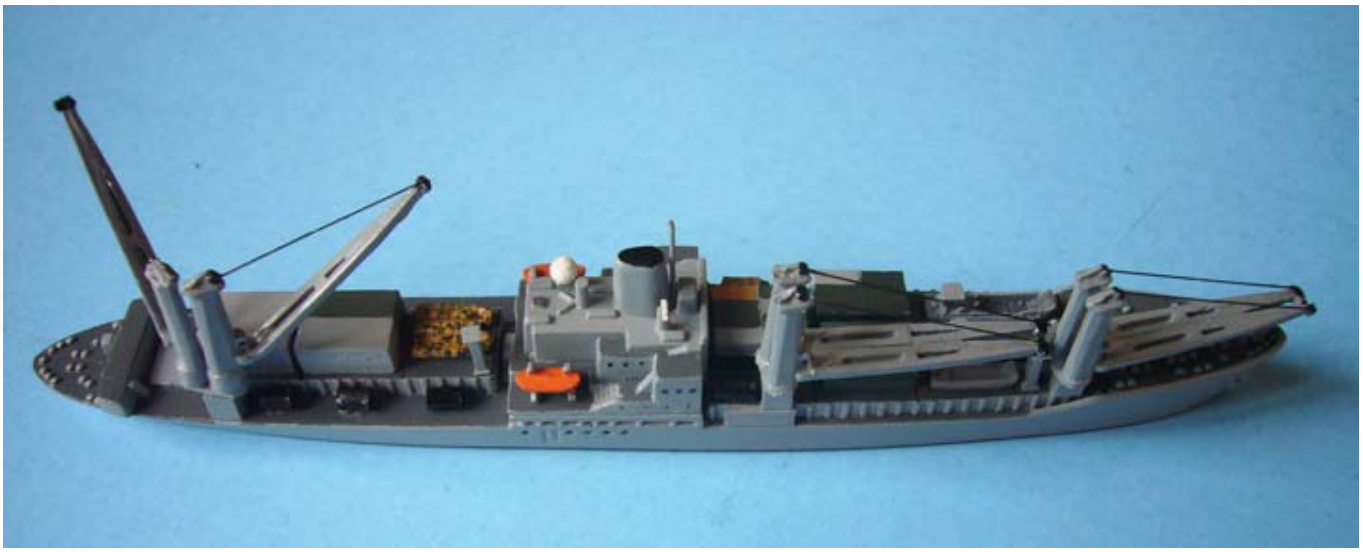
To make the model look "busy" I sourced a variety of deck cargo -

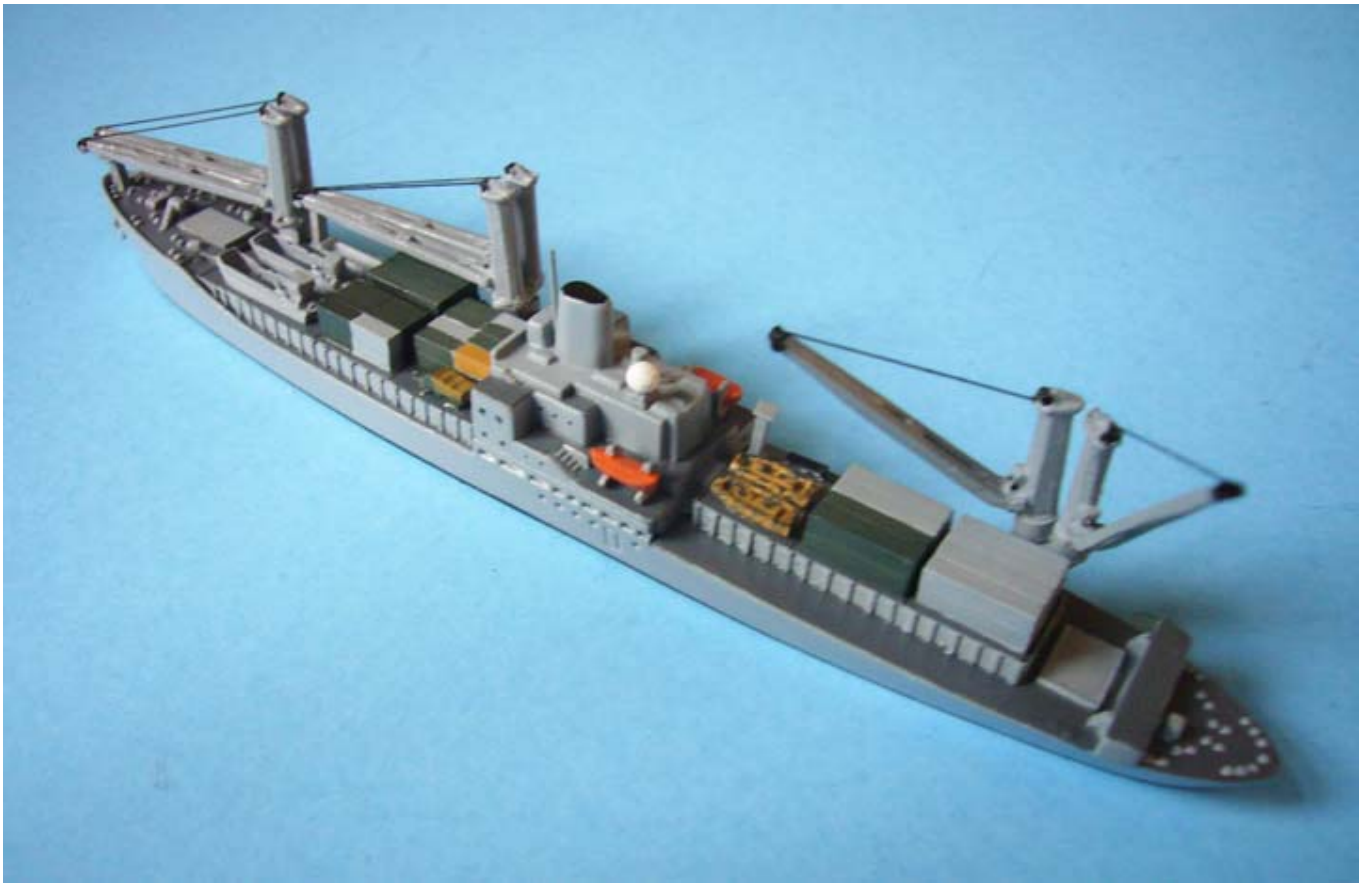
- the containers were a mixture of left-overs from a pack from Wirral Miniatures and some plastic ones from a Tri-ang container accessory pack (the latter had their small locating lugs removed) - to give the military container effect the majority were painted up with Humbrol 128 (Grey), Humbrol 63 (Matt Sand), and Humbrol HR 140 (Olive Green) or if not available perhaps Humbrol 86 (Matt Light Olive);
- the two RIBs on the aft deck are from Mountford (they are in fact 1/700 scale 22ft RIBs which work out perfectly as 36ft x 10ft ribs which are used by the US Marines) - these were painted overall in Humbrol 63 (Matt Sand) and then splashed with Humbrol 86 (Light Olive) using a small brush to give camouflage effect;
- the truck on the forward deck is a Mountford GMC truck painted up in Humbrol 86 (light Olive) with the canopy painted in Humbrol 26 (Khaki);
- the three landing craft are from the spares box - two LCM 6 type and a single LCVP;
- in the gap on the starboard side forward and on the starboard outboard side of the container deck aft I fitted three fenders which were made from cut lengths of 2.5mm diameter plasticard rod painted Humbrol 33 (Matt Black)

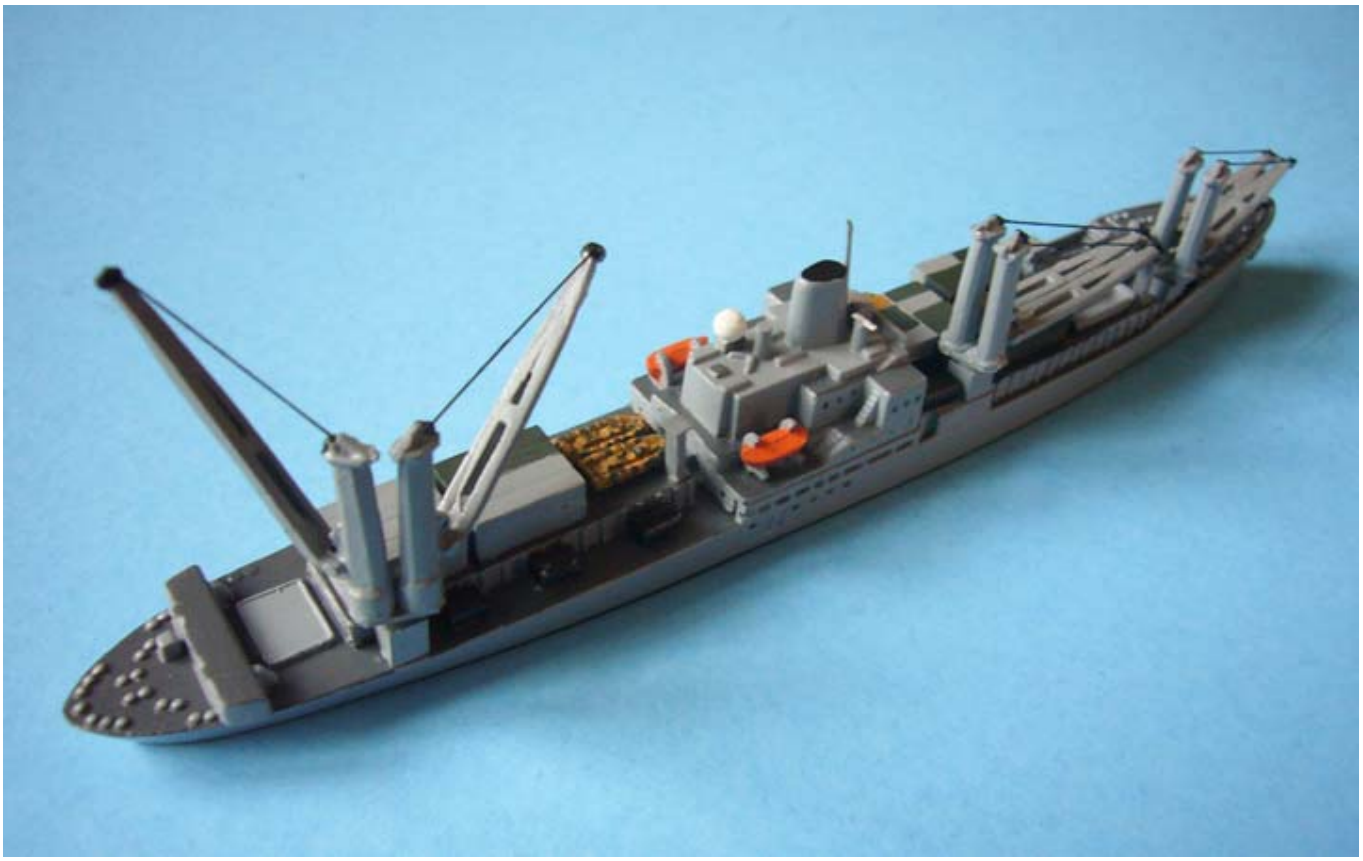
With everything painted the hull and "accessories" were then varnished with Humbrol Satin Cote and once dry the cargo was fitted in position and the completed bridge structure screwed back in place.



Finally the cranes were installed to complete the model as shown in the photos below.







Paints	Colour	Description
Humbrol 128 "US Compass Grey" (Satin)	"Haze Grey"	Hull / Vertical Surfaces / Cranes / Masts etc
Humbrol 125 "US Gull Grey" (Satin)	Dark Grey	Deck Surfaces
Humbrol 33 Black (Matt)	Black	Waterline / Boot Topping, Funnel Cap, Highlights
Humbrol 82 "Orange Lining" (Matt)	Orange	Lifeboats
Humbrol 22 White (Gloss)	White	Radar "Golfball" Dome
Humbrol Satin Cote	Varnish	Overall finish
Pilot DR Ink Pen (Size 0.1 & 0.2)	Black Ink	Windows and other markings

(For comparative paint colours please have a look at the "Paints / Colours" page)

Material	Description
Paint Stripper	Blackfriars Paint & Varnish Remover (but Nitromors or Polycell should work as well)
Filler	Milliput Epoxy Putty
Plastic Sheet / Section / Rod	Plasticard / Styrene - 0.25mm & 0.5mm - Sheet 0.5mm / 3.0mm / 4.0mm - Square Section 1.0mm x 0.5mm / 1.0mm x 1.5mm - Rectangular Section 2.5mm diameter - Rod
Metal Rod	0.45mm & 0.8mm diameter brass wire

T-ACS 3 Grand Canyon State

Photograph courtesy of Military Sealift Command (MSC)

Specifications

Name:	SS President Monroe - IMO 6520911 / Gem State (T-ACS 2)	
Sister Ships:	SS President Polk - IMO 6510899 / Grand Canyon State (T-ACS 3) SS President Harrison IMO 6605022 / Keystone State (T-ACS 1)	
Owner:	American President Lines (APL)	
Builders:	National Steel & Shipbuilding Co., San Diego, California - Yard No. 340	
Design:	C4-S-1qa - MARAD Hull No. 166 / C6-S-MA1qd after lengthening	
Launched:	1966	
Displacement:	9,227 tons / 13,388 deadweight tons	
Length (OA):	563 ft (171.6 m) / 668 ft 7 ins (203.8 m) after lengthening	
Beam:	76 ft 1 ins (23.2 m)	
Draft:	26 ft (7.9 m)	
Propulsion:	2 Foster Wheeler WT boilers operating at 620 PSI (Wet Pressure), geared powered turbine, single shaft / screw, 19,250 HP	
Maximum Speed:	20 knots	
Cargo Capacity:	769,949 Cubic Feet / 21,803 Cubic Metres / 300+ teu	
Crew:	37 Civilian Mariners (Full Operational Status) 10 Civilian Mariners (Reduced Operational Status)	
History:	1972	Lengthened 105 ft & converted to full container ship at Todd Shipyards, Seattle
	1979	traded in to MARAD then leased back by APL
	1982	returned to MARAD and laid up in the Reserve Fleet
	1984	converted to Crane Ship by Continental Marine, San Francisco renamed Gem State & designated T-ACS 2
Status / Disposal:	Ready Reserve Fleet at Alameda, California - held on 5 days readiness	

Further details can be obtained from the following links -

Wikipedia - SS Gem State (T-ACS-2)	http://en.wikipedia.org/wiki/SS_Gem_State_(T-ACS-2)
Wikipedia - Keystone State Class Crane Ships	http://en.wikipedia.org/wiki/Keystone_State-class_crane_ship
Military Sealift Command Web Site	http://www.msc.navy.mil/inventory/ships.asp?ship=90
The Navsource Web Site	http://www.navsource.org/archives/09/76/7602.htm