LMS Ivatt 2 2-6-2T Loco Ladder Instructions

Introduction

This set of instructions covers Rumney Models kit X.22. This is and etched ladder, designed by Pete Tarver to suit the Bachmann Ivatt class 2 tank body. While drawing it up it became apparent that the body isn't quite scale in the location of the various fittings – and the rear of the bunker is quite busy, especially on those that were motor train fitted. The rungs have been kept equally spaced as a ladder should be (which does mean that a couple of them don't line up with bits of the bunker as can be seen with close inspection of the prototype) but overall, I think we can all agree is a vast step forward from the plastic ladder supplied on the Bachmann model!

See page 25 of the Book of the Ivatt Class 2 2-6-2Ts by John Jennison (Irwell Press 978-1-911262-34-3) [ref 1] for a clear comparison between the motor fitted and non-motor fitted versions.

Notes

Check all holes before removing parts from the fret. The drawing process for etching, if you use a CAD program as I do, is extremely accurate but the actual etching process itself not an exact science. If the fret is slightly over etched, then there is no problem but if they are under etched the holes will need enlarging. I find that this is easiest to do before removing parts from the fret. The hole sizes will be noted at the appropriate points. Use an appropriate drill or a tapered reamer.

Remove one part at a time from the fret.

The instructions will assume that tags connecting parts to the fret will be cleaned up on removal of a part unless it is specified specifically in the instructions not to.

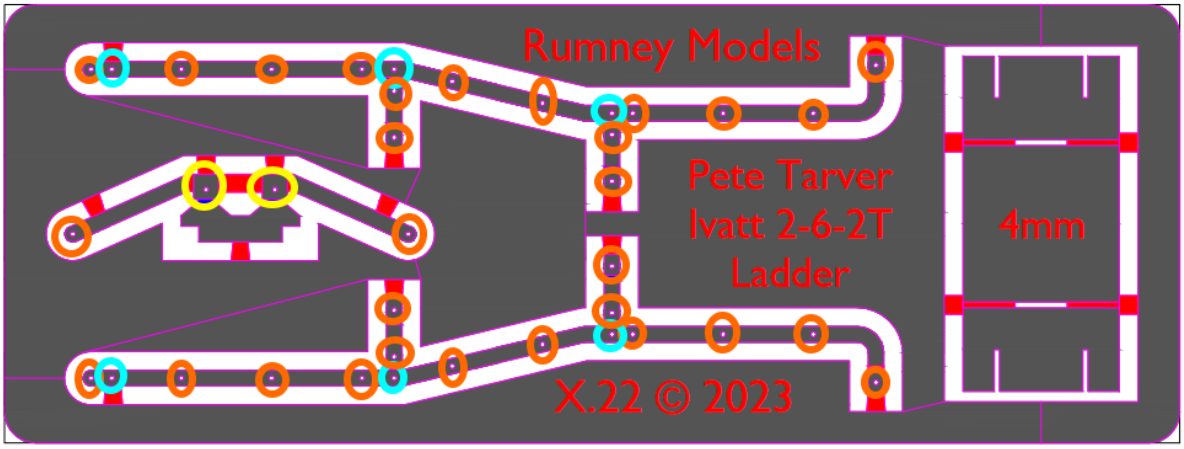
Very important:
All fold lines are through 90° with the fold line on the inside unless stated otherwise.

This means that when I say fold something up the folds should be made through 90° with the fold line on the inside. If the fold is to be done in any other way I will say so.

Everyone has their own soldering methods. I now use an Antex 50W temperature controlled soldering iron with predominantly 145° solder and La-Co paste flux.

Material Required

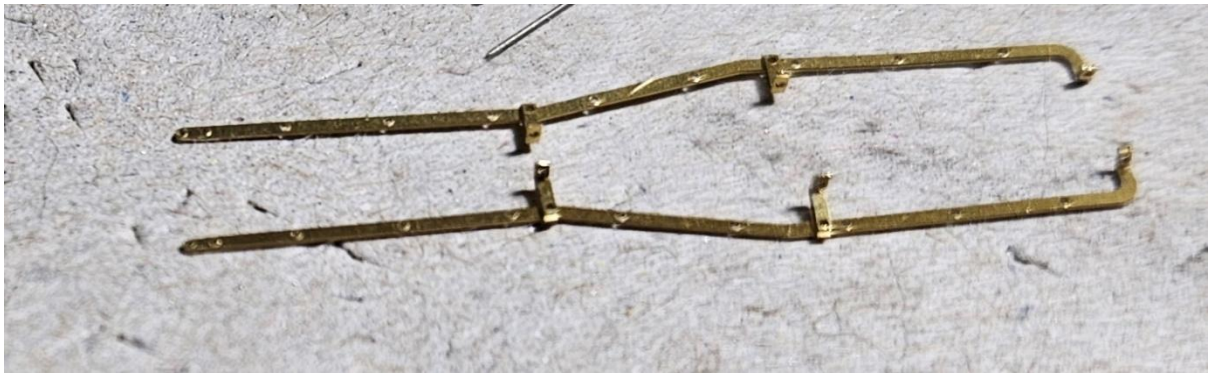
You will need some 0.31mm & 0.4mm wire. Nickel Silver was used on the test builds. Cambrian models is a good source for these.



While all the parts are still in the etch, open out the holes circled orange and blue to allow 0.31mm wire to feed through with a cutting broach, and the 2 circled yellow to 0.4mm.

Cut 9 x 5mm(+) and 6 x 2mm(+) lengths of 0.31mm wire.

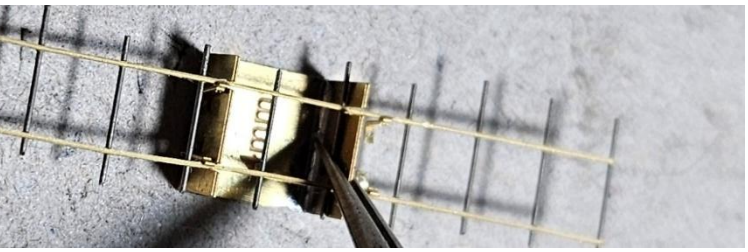
Cut out and fold up the latter sides. The top bracket (at the curved end) folds 90 degrees.
The middle and lower brackets fold 180 degrees (half etch on the outside) where it meets to ladder frame, and 90 degrees for the 'foot'.



Fold up assembly jig. This doesn't have to be exactly square, as it is used in the other orientation, but soldering it helps keep it rigid in use.

Lay the ladder sides in the jig – 'feet' towards the middle of the ladder.

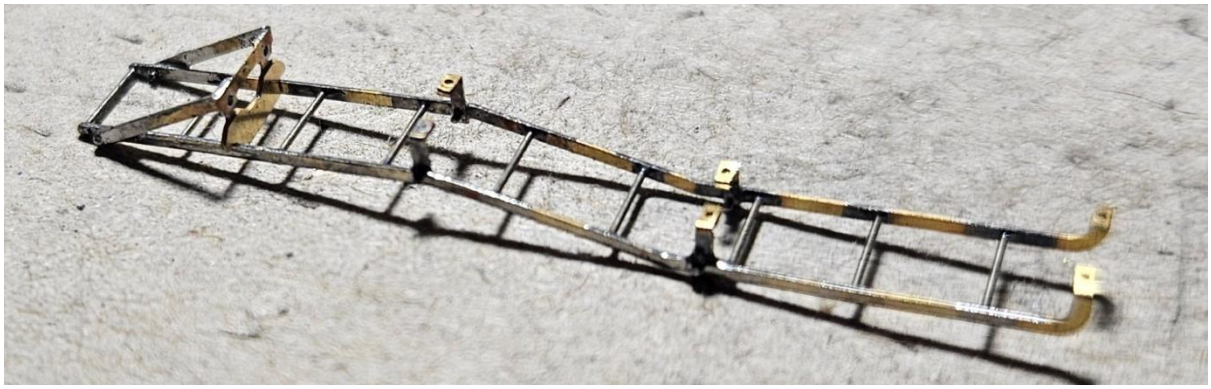
Slide in the 0.31mm rungs across. These do not go in the 2nd hole up or through the brackets (circled blue in the diagram). Hold a rung against the assembly jig to keep it all square while soldering in the first rung, and work along fitting all the rungs.



Use 4 of the short lengths of 0.31mm wire to fix the brackets. Give these a small amount of length on the inside of the ladder (be precise so that this bit looks like a bolt head, but doesn't require cutting or filing down later) with the extra length on the outside of the ladder where it is easy to clean up.

Remove from jig, clean, and clean up, before fitting the frame struts.

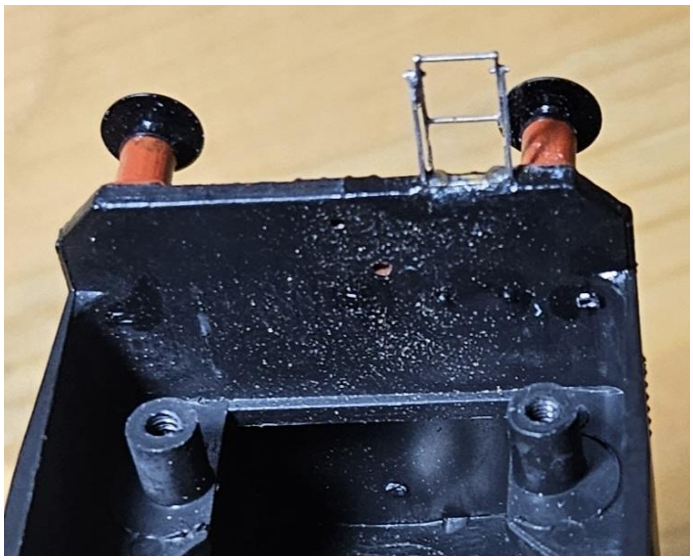
Fold the frame struts to 90 degrees. Use the remaining 2 short lengths of 0.31mm wire to pin these to the outside of the ladder (as with the brackets, enough showing on the inside for a bolt head).

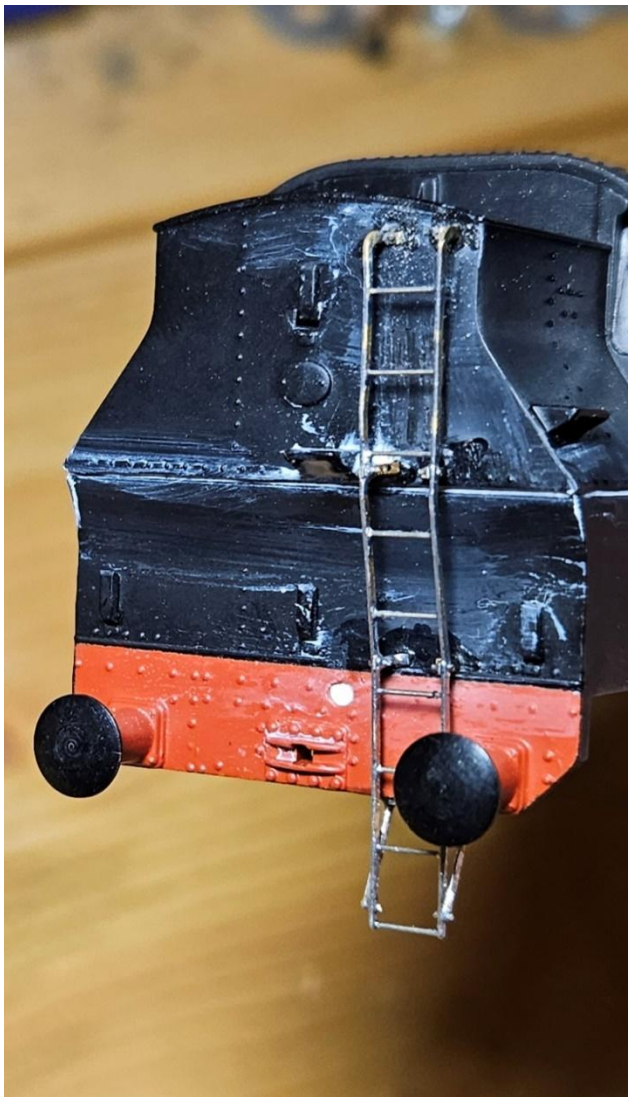


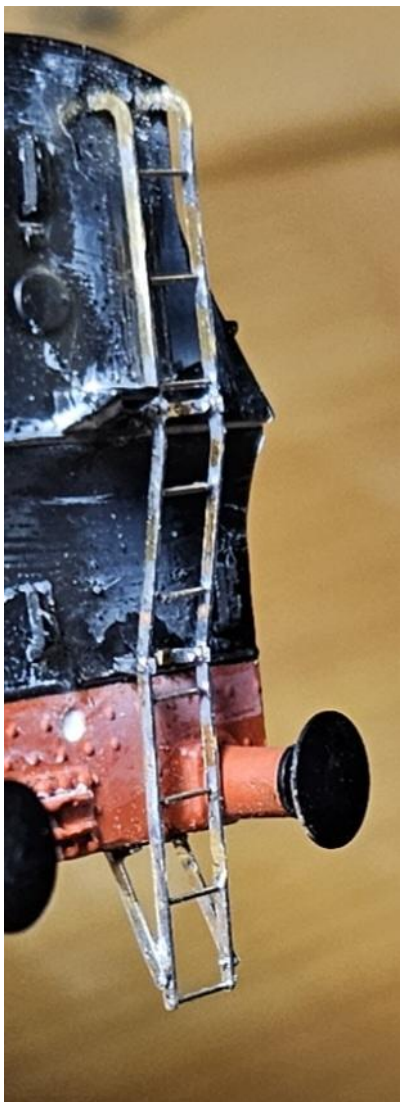
Clean up before snapping off the ‘spacing jig’ section of the frame struts.

The frame strut can be pinned vertically to the bottom of the Bachmann bufferbeam, with 0.4mm wire. I pinned the top pair of feet to the bunker rear with 0.31mm wire, but just superglued the middle 2 pairs of feet (without pinning) as it all felt pretty solid.

As said in the introduction, note that while the location of the bottom of the ladder was the same on all locos, the motor fitted ones had a kink in the ladder [ref 1] (easiest to form after assembly, but prior to fitting to the loco) and the top of the ladder ended up flush with the side of the ladder.







Pete Tarver & Justin Newitt September 2023