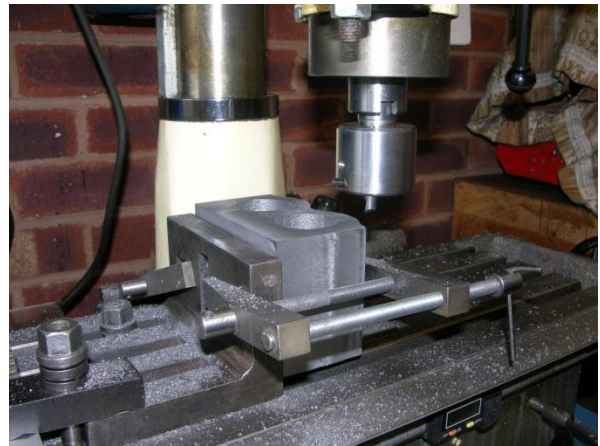
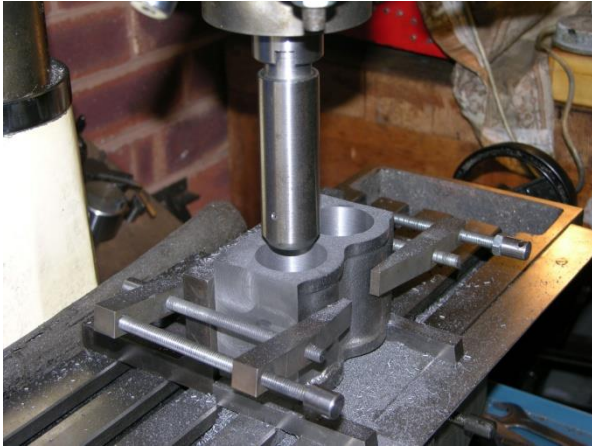


More on the Progress of the Aspinall - Another Boring Job

Keith Jones

This short article shows how I bored out the cylinders for my L and Y Aspinall goods loco. The cylinder casting was first squared up then milled to size photo 1. I then roughed out the two bores to minus .020". This boring was done on the miller using hand feed as I have no power feed on the Z axis. A solid boring bar was used which is made to fit directly into the quill of the machine as this was more rigid than a boring head. I have digital scales on my miller so it was easy to index the two centers accurately (see Photo 2).



Now for the final boring, this was done on my 5" Boxford lathe as I wanted to use power feed to achieve a fine finish in the bores. I used a boring head that was loaned to me by my good friend Ivor Williams. Ivor made this beautiful boring head some time ago to fit his Boxford lathe. Photo 3 shows this head and the set up on the lathe. The clear graduations made half thou cuts no problem when getting near to size.

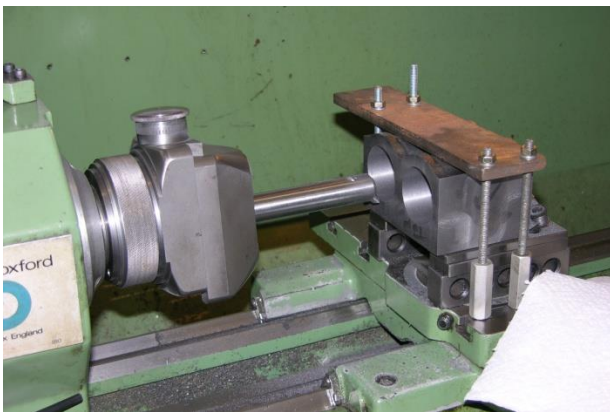


Photo 4 shows the boring set up and the boring head. The bores were first clocked and checked for height and centers, I then realized that any wear on the cross slide screw would put the bore centers out when indexing across. To solve this problem I added a temporary digital scale to my lathe cross slide to read off the distance directly. To do this I made an alloy dovetail clamp to fit the cross slide a small brass screw to nip on the dovetail slide and two small brass clamps to hold my digital calliper (see Photo x). As my lathe is metric, a movement of 2.000" should have been 50.8 mm on the scale. But in fact I had to move the scale a reading of 50.82 showing that the lead screw is out by .0015" over two inches.

The final boring pass left 001" for later honing.