piscisteve

Joined: 24 Dec 2005
Posts: 6
Location: Trawden, Lancashire
Posted: Fri Mar 03, 2006 5:49 pm Post subject: Easily machineable stainless steel

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Dear Scott Fans

I have managed to purchase OG 1691 a 1930 flyer, which is in need of some tlc.

It needed a new rear brake rod, the original being made from 5/16th mild steel, but being clever I thought I make a new one out of stainless. I think I purchased either 303 or 304.

Much to my disapointment I found putting a 26tpi thread on this bar very hard work despite using vast quantities of Rocal cutting compound. To cap it all, I now need a new die.

I beleive that there is easily machineable stainless, but does anyone know what to ask for and where I can get a small quantity in imperial sizes?

Regards Stephen
[/quote][/u][/i]

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Tony Scott

Joined: 07 May 2005
Posts: 5
Location: London UK
Posted: Fri Mar 03, 2006 8:31 pm Post subject:

I have used Mallard Metals for small quantities of metal in the past and found them very helpful.

Website at: www.mallardmetals.co.uk

Got a materials list and contact details there.

Hope I've not broken any rules by posting this here.

Regards
Tony Scott

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Shaun Matthews

Joined: 31 May 2004
Posts: 29
Location: lincoln
Posted: Fri Mar 03, 2006 9:11 pm Post subject:

I used 8mm 316 and screw cut mine . Needs good sharp tool steel and a travelling steady. - Metric sizes are available overnight from RS (www.rswww) - a bit expensive but great service - also carry lots of other useful materials.

1930 TT rep

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efr215

Joined: 06 Nov 2004
Posts: 80

Posted: Fri Mar 03, 2006 10:05 pm Post subject:

As stainless steels go 303 & 304 should machine quite easily. My suspicion is that maybe your die was on its last legs anyway and was forming the threads as much as cutting them resulting in a degree of work-hardening, that or you didn't get what you thought you'd got!

If you have access to a lathe it is worth roughing threads and finishing with a die or better yet a dienut. Even a half cut thread will take a lot of the load off the die and the tougher the material the more it is worth making the effort.

It is worth noting that few dies will have more than 8 cutting facets and that means even on a 26tpi thread each cutting edge is taking a 0.003" cut off both flanks of the thread. If I were screwcutting such a thread that is about twice as much as I'd choose to remove off one flank per pass.

Another point is that a 70% thread, (effectively one missing the radius on the top), still retains about 90% of its maximum strength but requires far less cutting effort. On difficult materials it is therefore worthwhile reducing the nominal diameter of the material before screwing. In any event there is always a degree of extrusion of the material with the cutting action so it is good to have somewhere for it to go.

If you are really stuck I have a small supply of stainless in various sizes so I might be able to help.

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piscisteve

Joined: 24 Dec 2005
Posts: 6
Location: Trawden, Lancashire

Posted: Tue Mar 07, 2006 6:53 pm Post subject:

Thankyou all for a wonderful response

My efforts to get OG 1691 back on the road are now developing quite quickly

What a wonderfull resourse the forum is.

Regards Stephen