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WHAT'S HAPPENED TO MYFORD?

NEW BOOK TITLES

WHAT IS TREPANNING?

THE TURNING TOOL SET CHOICES

2 OR 4 FLUTE END MILLS Yes it's true. Myford UK are no longer in business. A customer rang and asked about the Myford web site advertising a liquidation sale on Sat 16th July. We knew nothing about it.

Our direct contact with Myford revealed it was true. The owner Cyril Moore passed away 2 weeks prior and his son closed the business the following week. The entire stock of spare parts and accessories has been purchased by a company in the UK that specialises in sales to the home and hobby machinist.

At the time of writing we are unaware if the new owners of these parts are going to make their inventory available to us as an Australian distributor. We are also unaware if they will continue to manufacture the spares and accessories to support the thousands of these machines around the world.

The Myford company demise is not unexpected. Particular Chinese lathes have made huge progress with their quality at one tenth the price of a Myford Super 7. The accuracy and reliability are on a par these days though the Chinese models are not as robust.

Buyers know they wouldn't wear out the lathe in their lifetime and have migrated to the Chinese product en masse. A sad day for Myford and their staff none the less. We will keep you posted.

New Book Titles

Metal Finishing Techniques – Alex Weiss - \$27.50 Miniature Injectors Inside and Out – D. A. G. Brown - \$37.40 Model Locomotive Valve Gears – Martin Evans - \$22 Practice & Theory of the Injector – Strickland Kneass - \$22 Valve Setting - LH Morrison - \$17.60 Model Steam Locomotives – Henry Greely - \$37.50 The Briggers – Elspeth Wills - \$37.50 Not Much of an Engineer – Sir Stanley Hooker - \$35 Fedden – Bill Gumson - \$35 Advanced Steam Locomotive development – LD Porta - \$22 Hush-Hush, the story of LNER 10000 – William Brown - \$42 Tornado- Tom Ingall - \$22 Model Engine Making - John Pocock 1880 - \$19.25 The Model Engineers Handybook – Paul Hasluck 1918 - \$19.80

Julia Gillard met with the Queen of England. She asked her, "Your Majesty, how do you run such an efficient government? Are there any tips you can give me?" "Well," said the Queen, "the most important thing is to surround yourself with intelligent people." Julia frowned, and asked, "But how do I know the people around me are really intelligent?" The Queen replied "Oh, that's easy; you just ask them to answer an intelligent riddle." The Queen pushed a button on her intercom. " Please send Tony Blair in here, would you?" Tony Blair walked into the room and said, "Yes, Your Majesty?" The Queen said, "Tony, your mother and father have a child. It is not your brother and it is not your sister. Who is it?" Without pausing for a moment, Tony Blair answered, "That would be me. "Yes! Very good," said the Queen. Julia went back home to ask Wayne Swan the same question. "Wayne, your mother and your father have a child. It's not your brother and it's not your sister. Who is it?" "I'm not sure," said Wayne. "Let me get back to you on that one..." He went to his advisors but none could give him an answer. Finally, he ran into John Howard out eating one night. Wayne asked, "John, can you answer this for me? Your mother and father have a child and it's not your brother or your sister. Who is it?" John answered , "That's easy, it's me!" Wayne smiled, and said, "Thanks!" Then, he went back to speak with Julia. "Say, I did some research and I have the answer to that riddle. It's John Howard!" Julia got up, stomped over to Wayne, and angrily yelled into his face, "No! You idiot! It's Tony Blair!"

WHAT IS TREPANNING?

Trepanning is a process used to produce holes or circular grooves by using one or more cutters and revolving them around a center. The end result leaves a core. What geologists do when they drill through rock or ice and extract the core to examine the layers, is one type of trepanning. Cutting the grooves on the face of a 4 Jaw chuck or lathe face plate or rotary table is achieved by this process. Cutting the grooves for O Rings is also trepanning as defined below.

Trepanning machining is used to produce the following features and parts:

• Disks from flat stock.

•Large diameter through holes in flat stock.

Face grooves

•Machining internal and external circular grooves or o-ring glands.

A trepanning tool can be thought of as much like a hole saw but with only one tooth. A question machinists should ask them selves when performing а trepanning task to create а groove to house an O Ring is...How deep should an O ring groove be? Well this from the Parker O Ring handbook should be helpful...

In dynamic applications, the maximum recommended squeeze is approximately 16%, due to friction and wear considerations, though smaller crosssections may be squeezed as much as 25%... When used as a static seal, the maximum recommended squeeze for most elastomers is 30%,... It is essential to allow at least a 10% void in any elastomer sealing gland.

(Gland refers to the groove that the O ring fits into. For this reason these grooves have a square or rectangular profile and not a rounded one)

This Circle Cutter is an example of one type of trepanning tool and is used primarily to cut discs (if considering the core as the object of the operation) or large diameter holes in flat material (if considering the outside of the cut or the cut groove itself as the objective) These tools cut up to a 6" diameter.



Circle Cutters are available at Minitech for \$22

THE TURNING TOOL SET CHOICES

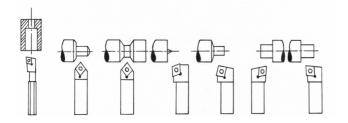
The market is awash with a dazzling array of turning tools. Many of these were designed as specialist tools for customer and the suppliers have then made available to everyone. As this can be confusing, here is a brief review of each to guide you to make proper choices for the major turning functions you perform. The tools in the image below are INDEXABLE tools. They have removable tips, usually made of Tungsten Carbide. They can be rotated to use other points of the tip – as shown.



They are not able to be sharpened. They holding tool comes in 8mm up to 25mm shank size and in sets of 3, 5 or 7 tools. Tips range in price from about \$10-\$20. Most retailers only sell the tips in packs of 10 but Minitech sell them as individual tips also.



The functions they perform are as follows...



Sets of Indexable tools including the tips range in price from \$143 for the 3 piece 8mm set up to \$352 for the 16mm 7piece set. Other size sets would require us to get a quote.

The tools below have Tungsten Carbide tips that are brazed on to the tool. They can be used for cutting very hard materials. They have a limited potential for resharpening as long AND as you have a suitable grinding wheel to perform the task.



Minitech have sets of these for as little as \$71.50 for a set of 12 in 8mm shanks.

That leaves the High Speed Steel sets that are preground. They come in sizes of 6, 8,10 and 12mm shanks These can be ground with a regular wheel and to suit whatever your requirements are.



The 8 piece set above includes, turning, facing, finishing, Parting/grooving. boring, internal and external thread cutters. For the very occasional turner of softer materials, this option is close to being completely adequate. Prices range from \$77 for the 8 piece set to \$181.50 for the 12mm set

BOOK REVIEW...

Metal Finishing Techniques Alex Weiss

After a 10 page introduction to the subject, 10 chapters follow covering: Grinding, Sanding, Buffing and Polishing, Honing and Lapping, Reaming, Broaching, Burnishing and Scraping, Bare Metal Finishes (these include plainishing and peening, chasing and repoussé, engraving, knurling, oil or grease coating, other rust barriers and etching), Metal Colouring and Painting. Whilst you will not learn every last-thing on these subjects from this book - there is, after all, only so much that can be put into 120 A4 format pages, there is a huge amount of relevant information here, which any model engineer will find useful. I learnt a lot from this book, especially on exactly what happens to metal as it is worked in various ways. High quality paperback, full of B&W photos, and diagrams, plus a listing of useful contact and suppliers. Courtesy Camden Books

(I purchased a couple of these books from the UK and couldn't get them on display as they were sold from off my desk before I could get them out. A good quality publication. Bob)

STOP PRESS!!!

The purchasers of 95% of the Myford Inventory have just been in contact with me and have advised that they plan to relaunch the Myford business.

The have advised that the parts and accessories will continue to be available and that they plan to continue manufacturing the Myford products, albeit by external smaller UK based engineering companies.

They have asked everyone to be patient as it will take them 3-4 months to transport everything to their premises and to complete the setting up.

Two old friends met by chance on the street. After chatting for some time one said to the other, "I'm terribly sorry, but I've forgotten your name. You'll need to tell me". The other stared at him thoughtfully for a long time, then replied, "How soon do you need to know?"

2-Flute Versus 4-Flute

2-Flute mills are generally used for cutting slots or grooves, while 4-flute mills are more often used for surface milling, using the end or side of the mill. 4-flute mills will do most of what of a 2-flute mill can do, but not necessarily vice-versa. But each type is best for certain operations. Here is an extract from an Internet forum at <u>www.mini-lathe.com</u> that may be of interest....

A 2 flute cutter (or slot drill) is designed to be able to plunge the mill directly into the work. If you look at the business end of the cutter, you will see that the two blades are of unequal length, one of the blades goes right across the middle. This allows the cutter to mill directly under it. It can be used to cut vertically or horizontally, but the horizontal cut is not likely to be as good as the 4 flute cutter. If the blades on the end of a 4 flute cutter (or end mill) do not pass the centre, it is not designed to be "plunged". Many even have a hole in the middle where nothing can be milled. This type of cutter can only be used to mill in a horizontal direction. Graham

Um... That's (sort of) the difference between center cutting and non-center cutting, but not really between 2 and 4 flute end mills. The real difference has more to do with feeds. finish and such. Basically, a cutters RPM is based on its composition and what you're cutting with it. How fast you can take off how much material is a function of how many flutes you have. The fewer flutes, the slower the feed must be. The more flutes, the faster the feeds can be. Also ... I read a bit a while back that explained how 2 flute end mills were better for slotting and 4 flute end mills were better for finishing. The former had to do with the fact that the 2 flute cutter bites into both walls at the same time and, when cutting to the front, cannot cut the sides. Conversely a 4 flute end mill will cut both the front and sides at the same time and the front cut will cause the cutter to flex, varying the depth of the side cuts making the finish rougher.