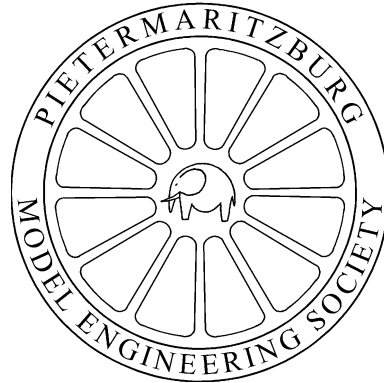


# *Maritzburg Matters*

December



2018

PIETERMARITZBURG MODEL  
ENGINEERING SOCIETY



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**Club Meetings-** **General Meeting:** Third Monday of each month at 19H45 at Halley Park. Visitors welcome  
**Running Day:** First Sunday of each month  
**Committee meetings:** First Monday of each month  
**Work Day:** Saturday following the General Meeting

**Web Page-** [www.pmes.co.za](http://www.pmes.co.za)

**Facebook-**  Find us on Facebook (Pietermaritzburg Model Engineering Society)

**GPS co-ordinates-** 29.5833° S, 30.4167° E

No responsibility is taken by the Society for any subject matter in this Newsletter other than official Society notices.

The year has finally come to an end with the last running day, Christmas dinner, and last parties, we can look back on the past year with a sense of pride and satisfaction for a job well done! Much has been accomplished, much planned, and much started!! The station paving project has begun, many thanks to Ray Teichmann and Dave Tanner, we look forward to seeing the results as they unfold!

All of the required maintenance has been attended to in the efforts to keep things in top condition, this includes buildings, grounds, rolling stock, locos, and many others. This is the first time that we can claim this, it must be because of the added attention that we have had from members!

Our birthday parties have been successfully run by the small dedicated band of drivers, many, many thanks to them for undertaking this duty. We hope to be able to award some new drivers' licenses in the not too distant future, maybe a few more party drivers?

Our Running Days this year have generally been very successful with most days having seen around 800 to 1000 tickets sold, this is very encouraging and needs to be supported. We have seen an increase in the numbers of picnickers, this also needs to be encouraged. Although there were very few picnics behind the tunnel this month, the trend has been to occupy that space, we would like to see the newer area beyond the big bridge used as well, maybe something for the New Year? I must express the Club's sincere thanks to all of those involved in the Running Days; from the loco owners, drivers, signal men, ticket sellers, collectors, station assistants, to the exhibitors and supervisors of the engine project tables; the guys involved in setting everything up as well as clearing away; there are a large number of things that need to be done each day, with the enthusiasm that we are able to brag about, these tasks seem almost to be done by themselves, thank you!!

Our Christmas Dinner was once again a great success with a delicious spread, this despite the thunderstorm that we had been waiting for for so long, it crimped our style ever so slightly but didn't detract from a most enjoyable evening!

All that remains for me to do is to wish all of you and yours a Merry Christmas and a Happy and Fruitful New Year, I hope to see the fruits of your labours, at home in your workshops, making appearances at the Club!

## **Variable Pitch Bandsaw Blades**

Lori Balkus

The variable pitch bandsaw blades, their unique qualities and applications, are designed for a particular reason. In this case, it is pitch. Saw blade pitch is defined as the number of teeth per inch — TPI — the number of teeth that come in contact with the material being worked.

TPI has the ability to affect both the bandsaw blade's performance and its durability.

Too few teeth in the cut can lead to early stripping of the teeth. Conversely, too many teeth in a cut will greatly reduce the cutting rate and ultimately make the material impossible to cut.

The choice of correct tooth pitch can be decisive when it comes to things like achieving the optimum performance of the bandsaw and cutting of subsequent cross-section materials.

The description of a constant-pitch bandsaw blade indicates a uniform distance from one tooth tip to the next while a variable-pitch blade's teeth distance is within a group of teeth. The smallest and the largest tooth pitch denote the variable tooth of the saw blade. This may sound elementary to experienced people in the band sawing industry, but after hearing from a variety of customers — those with a broad and varied level of experience in the industry — the same question is still asked: When is a variable-pitch bandsaw blade used?

A constant-pitch saw blade can increase harmonic vibrations. Harmonic vibrations can lead to excessive noise, undesirable saw or saw blade vibrations, and in severe cases, a bad cut.

A variable-pitch saw blade, with teeth that vary in gullet depth, set angle and pitch, can greatly reduce harmonic vibrations. With varying tooth space,

sawing rhythms are interrupted, chip evacuation is improved, and vibration is reduced, resulting in less noise and a better overall cut.

This becomes particularly effective when cutting odd shaped materials that are more likely to produce vibration. Vibration in the cut will significantly shorten the life of the bandsaw blade.

A variable-tooth set will also help to reduce the tooth stripping that occurs when cutting hard materials. It also offers high heat, wear, and shock resistance. These allow for a broader range of application use when cutting metal. The combination of all factors results in the longest blade life among similar types of saw blade.

When combined with positive rake, the variable-pitch bandsaw blade has no equal due to its faster work penetration and increased sawing productivity.

### **Easy and Inexpensive Drill Bit Sharpener** From the Australian site [Krafty Farm Assistant](#)

Can't afford and expensive drill bit sharpener to ensure those angles are accurate?



Don't sharpen enough drills to warrant owning even a cheap sharpener?

Try this simple and inexpensive trick to help you ensure your drill bits have tip on them you can use.

Get two hex headed bolts and nuts and mount them in a piece of off cut steel or timber so that two of their edges are touching (as shown on the right).

Bolts of a suitable construction can be welded together to ensure they don't move.

Sharpen your drill bit carefully using a bench grinder being extra careful not to be too heavy handed.

After only a few moments of grinding remove the drill bit and test against the two hex headed bolts as shown on the right.

After touching up each cutting side of the drill your drill should fit squarely in the angle of the two bolt heads.



The accuracy obviously relies on how close you placed the two bolts together but with this guide it removes the need to eye ball the angle and hope that it's right.

Note: While a bench grinder is suggested an angle grinder firmly held in place can also be used, however Krafty Farm Assistant take no responsibility for the actions of readers. All caution should be taken, all safety gear should be worn and readers are responsible for their own actions.

## Tools Explained

Clive Dennison

**DRILL PRESS:** A tall upright machine useful for suddenly snatching flat metal bar stock out of your hands so that it smacks you in the chest and flings your beer across the room, denting the freshly-painted project which you had carefully set in the corner where nothing could get to it.

**WIRE WHEEL:** Cleans paint off bolts and then throws them somewhere under the workbench with the speed of light. Also removes fingerprints and hard-earned calluses from fingers in about the time it takes you to say, 'Oh sh--!'

**SKILL SAW:** A portable cutting tool used to make studs too short.

**PLIERS:** Used to round off bolt heads. Sometimes used in the creation of blood-blisters.

**BELT SANDER:** An electric sanding tool commonly used to convert minor touch-up jobs into major refinishing jobs.

**HACKSAW:** One of a family of cutting tools built on the Ouija board principle... It transforms human energy into a crooked, unpredictable motion, and the more you attempt to influence its course, the more dismal your future becomes.

**VICE-GRIPS:** Generally used after pliers to completely round off bolt heads. If nothing else is available, they can also be used to transfer intense welding heat to the palm of your hand.

**OXYACETYLENE TORCH:** Used almost entirely for setting various flammable objects in your 'shop on fire. Also handy for igniting the grease inside the wheel hub out of which you want to remove a bearing race.

**TABLE SAW:** A large stationary power tool commonly used to launch wood projectiles for testing wall integrity.

**HYDRAULIC FLOOR JACK:** Used for lowering an automobile to the ground after you have installed your new brake shoes, trapping the jack handle firmly under the bumper.

**BAND SAW:** A large stationary power saw primarily used by most shops to cut good aluminium sheet into smaller pieces that more easily fit into the trash can after you cut on the inside of the line instead of the outside edge.

**TWO-TON ENGINE HOIST:** A tool for testing the maximum tensile strength of everything you forgot to disconnect.

**PHILLIPS SCREWDRIVER:** Normally used to stab the vacuum seals under lids or for opening old-style paper-and-tin oil cans and splashing oil on your shirt; but can also be used, as the name implies, to strip out Phillips screw heads.

**STRAIGHT SCREWDRIVER:** A tool for opening paint cans. Sometimes used to convert common slotted screws into non-removable screws and butchering your palms.

**PRY BAR:** A tool used to crumple the metal surrounding that clip or bracket you needed to remove in order to replace a 50 cent part.

**HOSE CUTTER:** A tool used to make hoses too short.

**HAMMER:** Originally employed as a weapon of war, the hammer nowadays is used as a kind of divining rod to locate the most expensive parts adjacent to the object you are trying to hit.

**UTILITY KNIFE:** Used to open and slice through the contents of cardboard cartons delivered to your front door; works particularly well on contents such as seats, vinyl records, liquids in plastic bottles, collector magazines, refund checks, and rubber or plastic parts. Especially useful for slicing work clothes, but only while in use.

**SON-OF-A-BITCH TOOL:** (A personal favourite!!) Any handy tool that you grab and throw across the garage while yelling 'Son of a BITCH!' at the top of your lungs. It is also, most often, the next tool that you will need.

## **Club Notices**

- The next **General Meeting** will be replaced by the Christmas Dinner as usual. There will therefore not be a meeting until January!
- There will also not be a **Workday** this month, please reserve your energies for the January workday!!

- On behalf of the Committee and Members of the PMES, I would like to wish all of our friends and visitors a great Christmas and a Steamy New Year!!

