

SES Newvale Engineering



EXCELLENCE IN ENGINEERING



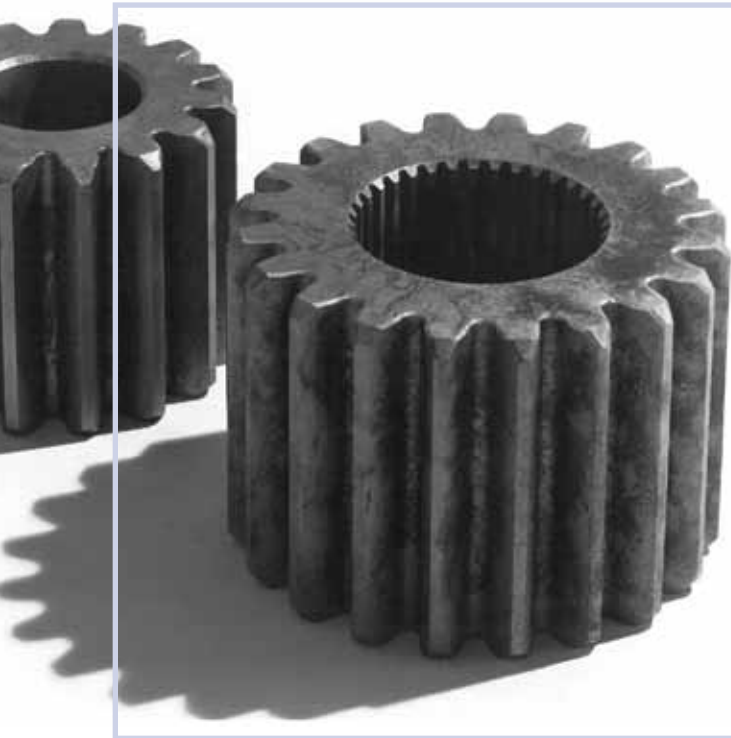
Southern
Engineering
Services Group



SES Linear Bearings is a division of Southern Engineering Services Pty Ltd

www.sesgroup.com.au

SES Newvale Gear Cutting



SPUR GEARS & PINIONS

When the teeth are cut parallel to the axis the gear is called a spur gear.

SES NEWVALE CAPABILITIES

- **Minimum tooth size:** 0.5 module (64 DP)
- **Maximum tooth size:** 12 module (2 DP)
- **Minimum diameter:** 5mm
- **Maximum diameter:** 1000mm
- **Materials supplied in:** Mild, carbon, case harden, alloy, steels, cast iron, stainless steel, nylon, fibre & bronze.

Any sizes not in our range we can project manage from start to finish using our suppliers.

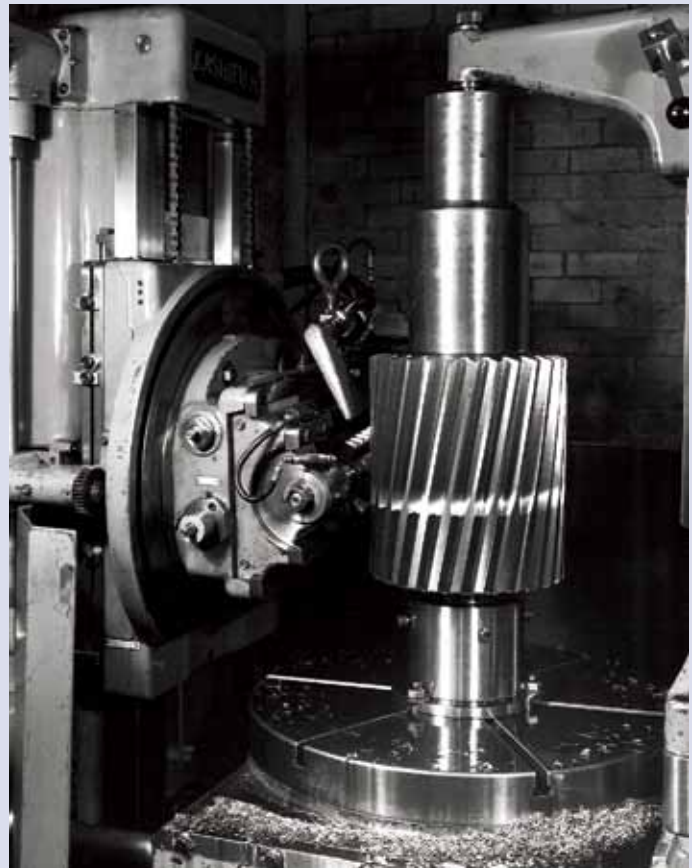
HELICAL GEARS & PINIONS

Helical gears are used to connect shafts where the axes are parallel and surface speeds are high or where the load on the teeth is heavy for the size of tooth.

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- **Maximum tooth size:** 12 module (2 DP)
- **Minimum diameter:** 5mm
- **Maximum diameter:** 1000mm
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WORM & WHEELS

Worm wheels have teeth cut at an angle to the axis. The diameter and teeth of a worm wheel is shaped to wrap around a portion of the worm shaft, which is similar to a screw thread.

SES NEWVALE CAPABILITIES

- **Minimum pitch size:** 3mm axial pitch
- **Maximum pitch size:** 70mm axial pitch
- **Minimum diameter:** 10mm worm shaft
- **Largest diameter:** 300mm worm shaft
- **Minimum centre distance:** 25mm
- **Maximum centre distance:** 1200mm.



BEVEL GEARS

When the teeth of a gear are cut on cones and the shafts intersect, the gears are known as bevel gears.

SES NEWVALE CAPABILITIES

- **Minimum tooth size:** 1 module (24 DP)
- **Maximum tooth size:** 20 module (1.25 DP)
- **Minimum diameter:** 20mm
- **Maximum diameter:** 890mm

Any size not in our range we can project manage from start to finish using our suppliers.

INTERNAL & EXTERNAL SPLINES

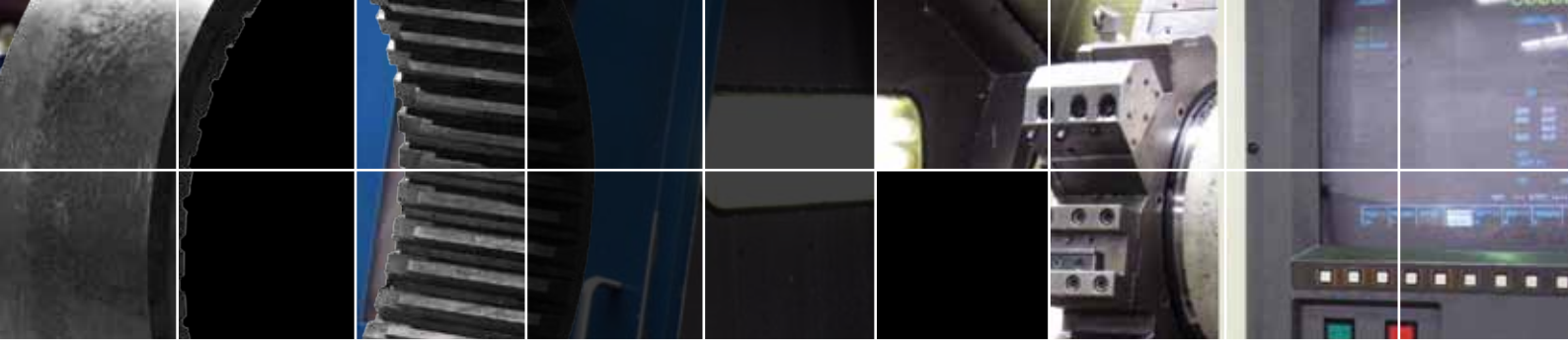
SES Newvale carry a large stock of Din standard and SAE standard Hobbs and cutters for both internal and external splines.



GEAR COUPLINGS

SES Newvale can supply and manufacture an extensive range of inner and outer gear couplings including crown hobbed couplings.

Any sizes not in our range we can project manage from start to finish using our suppliers.



GEAR GRINDING

Gear grinding eliminates distortion from heat treatment. The improved surface finish and accuracy gives a smoother rolling action.

SES NEWVALE CAPABILITIES

- **Smallest tooth size:** 1.5 module
- **Largest tooth size:** 12 module
- **Maximum face width:** 160mm
- **Largest diameter:** 680mm

Any sizes not in our range we can project manage from start to finish using our suppliers.



GENERAL MACHINING

WEBSTER & BENNET VERTICAL BORER

- **Maximum diameter:** 1.4 metres
- **Maximum height:** 600mm
- **Maximum weight:** one tonne
- **Suitable for turning of large spur & helical gears, track wheels and general machining.**

TURNING: CNC LATHE

- **Maximum swing:** 460mm
- **Maximum length:** 1.0 metres

Any sizes not in our range we can project manage from start to finish using our suppliers.

GRINDING

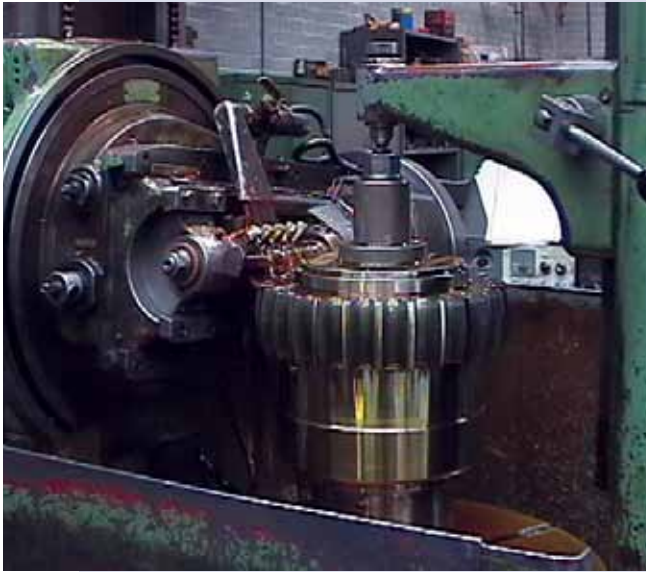
SES Newvale have a range of grinding equipment which includes surface, cylindrical, internal and thread grinders.

MILLING & SLOTTING

SES Newvale have a range of milling, drilling and slotting equipment. We are able to cut internal and external keyways and splines.

Any sizes not in our range we can project manage from start to finish using our suppliers.





INSPECTION & TESTING

Worn and new samples brought into SES Newvale's workshop are inspected for material hardness using a Rockwell hardness tester to help pre determine selection of material.

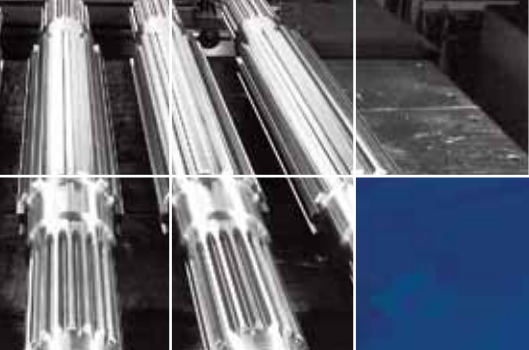
Worm and wheels are inspected on a purpose built tester. Centre distances are set on the tester. The worm shaft is painted in marking blue to check that the contact patterns are to the required standards.

Once bevel gears have been cut they are checked using the purpose built Gleason Bevel inspection machine. This determines that gears mesh correctly.

MORSE & REDUSPEED

- BTR discontinued production of worms and geared motor boxes.
- SES Newvale purchased the OME drawings and stock from BTR.
- Morse is renowned for making quality casings with only the internals wearing out.
- Traceability from serial numbers allowing SES Newvale to quote or manufacture internal parts when gearbox is still in service minimizing down time.
- Gear blanks and raw material in stock to reduce lead times.





Southern Engineering Services Group

Head Office

503-505 Princes Highway (PO Box 193)
Fairy Meadow NSW 2519 Australia
Phone 61 2 4283 9100
Email seswol@sesgroup.com.au

www.sesgroup.com.au



**Bearings
& Power
Transmissions**

SES Bearings & Power Transmission - Unanderra

15 Prince of Wales Avenue Unanderra NSW 2526 Australia
Phone 61 2 4272 2377 Email bearings@sesgroup.com.au

SES Bearings & Power Transmission - Newcastle

132 Hannell Street Wickham NSW 2293 Australia
Phone 61 2 4962 2777 Email newcastlesales@sesgroup.com.au

SES Bearings & Power Transmission - Muswellbrook

210 Bridge Street Muswellbrook NSW 2333
Phone 61 2 6543 4500 Email muswellbrooksales@sesgroup.com.au

SES Linear Bearings - Melbourne

2 Corporate Ave Rowville VIC 3178
Phone 61 3 9755 6044 Email sales@linearbearings.com.au

SES Linear Bearings - Adelaide

Unit 2, 2 Belfree Drive Green Fields SA 5107
Phone 61 8 8283 4177 Email sasales@linearbearings.com.au

SES Linear Bearings - Brisbane

Unit 4, 1645 Ipswich Road Rocklea QLD 4106
Phone 61 7 3274 3388 Email qldsales@linearbearings.com.au

SES Linear Bearings - Perth

Unit 2, 55 John Street Bentley WA 6102
Phone 61 8 9358 2444 Email wasaes@linearbearings.com.au

SES Linear Bearings - Sydney

19/14 Sheridan Close Milperra NSW 2214 Australia
Phone 61 2 9792 7188 Email nswsales@linearbearings.com.au

SES Linear Bearings - New Zealand

Unit 1, 138 Harris Road East Tamaki Auckland NZ
Phone 64 9 273 9723 Email sales@linear.co.nz

SES Newvale Engineering

18 Bessemer Street Blacktown NSW 2148 Australia
Phone 61 2 9672 4200 Email newvale.engineering@sesgroup.com.au

SES Bomond Trading

49 Orchard Road Brookvale NSW 2100 Australia
Phone 61 2 9939 1344 Email bomond@sesgroup.com.au

SES Mechanical Engineering Services - Newcastle

2/46 Munibung Road Cardiff NSW 2285 Australia
Phone 61 2 4954 9777 Email newcastlesales@sesgroup.com.au

SES Mechanical Engineering Services - Unanderra

14 Waverley Drive Unanderra NSW 2526 Australia
Phone 61 2 4272 2217 Email workshop@sesgroup.com.au



**Mechanical
Rebuild
Workshops**

SES Mining & Industrial - Unanderra

11 Prince of Wales Avenue Unanderra NSW 2526 Australia
Phone 61 2 4271 1444 Email mining@sesgroup.com.au

SES Mining & Industrial - Emerald

Lot 24 Glasson Street Emerald QLD 4720 Australia
Phone 61 7 4982 2466 Email qldorders@sesgroup.com.au

SES Mining & Industrial - Kurri Kurri

153 Mitchell Avenue Kurri Kurri NSW 2327 Australia
Phone 61 2 4936 4411 Email mining_hv@sesgroup.com.au

SES Mining & Industrial - Port Kembla

36-38 Gloucester Boulevard Port Kembla NSW 2505 Australia
Phone 61 2 4276 2322 Email atmining@sesgroup.com.au

SES Pumpcare International - Kalgoorlie

159-161 Dugan Street Kalgoorlie WA 6430
Phone 61 8 9021 4044 Email pumpcare@sesgroup.com.au
Free call 1800 4PUMPS

SES Pumpcare International - Perth

Unit 2/1956 Beach Road Malaga WA 6090
Phone 61 8 9209 1377 Email pumpcare@sesgroup.com.au
Free call 1800 4PUMPS



**Mining &
Industrial**



**Process
Engineering**

SES Process Engineering

503-505 Princes Highway Fairy Meadow NSW 2519 Australia
Phone 61 2 4283 9100 Email steel@sesgroup.com.au

SES Western Australia

Unit 2/1956 Beach Road Malaga WA 6090 Australia
Phone 61 8 9249 2951 Email ses@inet.net.au