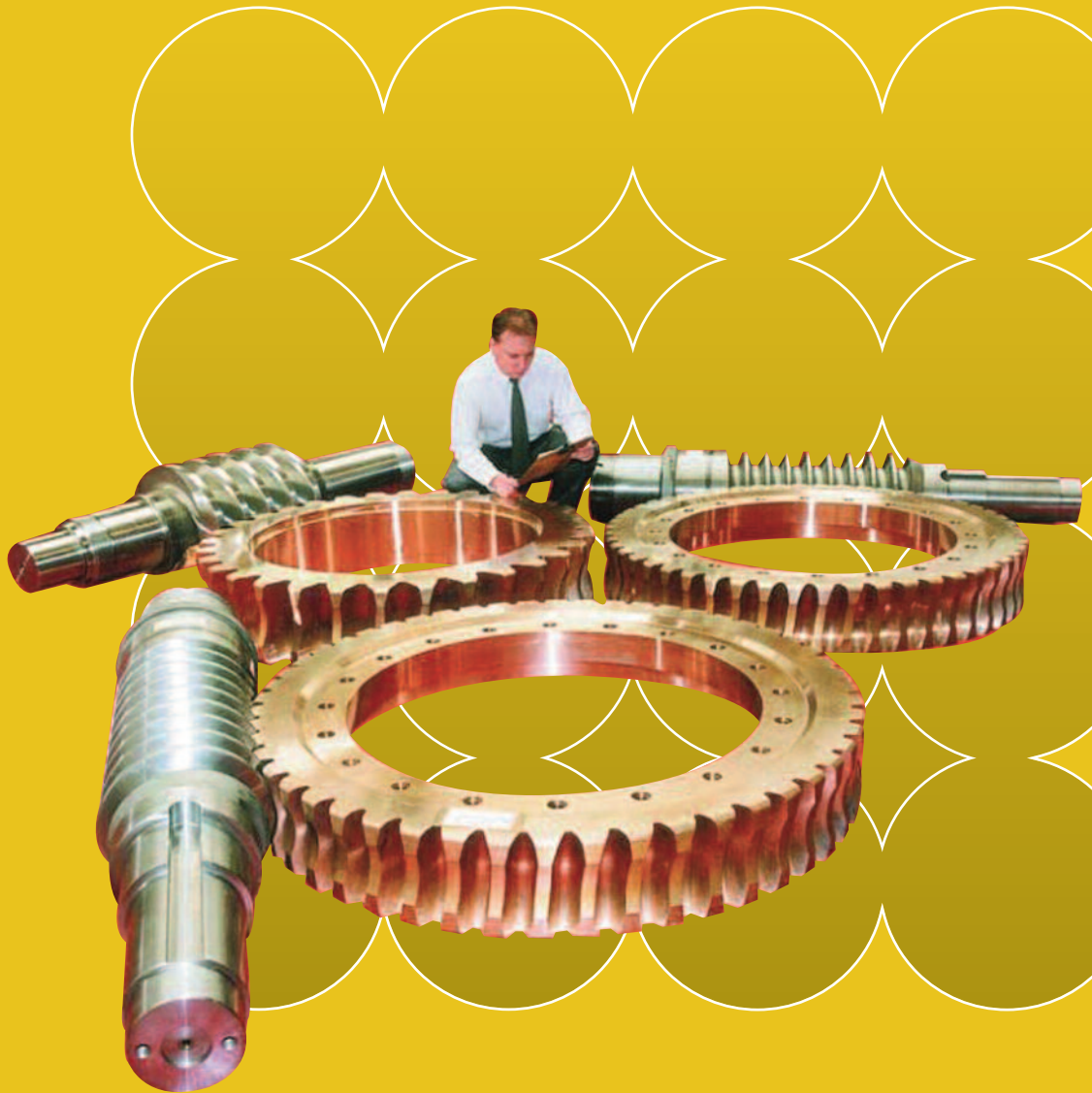


Holroyd

Large Worm Gears from Renold



RENOLD
Superior Gear Technology

www.renold.com

Extreme applications

In the production of worm gearing the unique Holroyd gear form is widely respected for its performance and reliability in a wide variety of drives.

In particular demanding applications which need strength and reliability such as coal pulverisers in power stations, screwdown gears in steel mills and large ball mills in use in the mineral extraction industry.

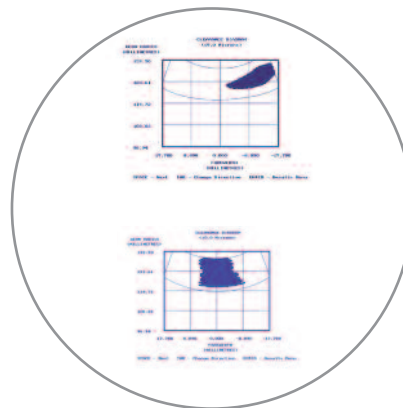
Unrivalled performance

In the production of worm gearing each gear set is manufactured using the highest specification, centrifugally cast, bronze alloy wormwheel rims; this ensures the maximum tooth strength.

Wormshafts are manufactured from high carbon steel forgings to ensure the strongest material structure. They are case hardened during manufacture for maximum wear resistance prior to final surface grinding.

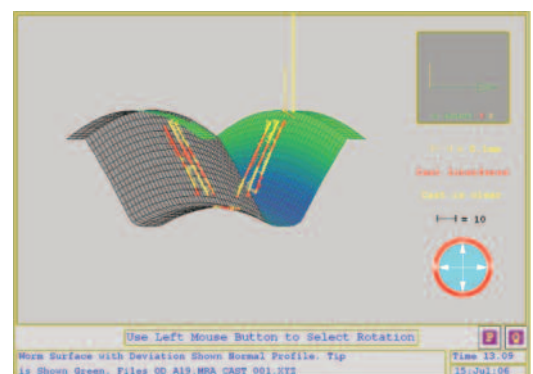
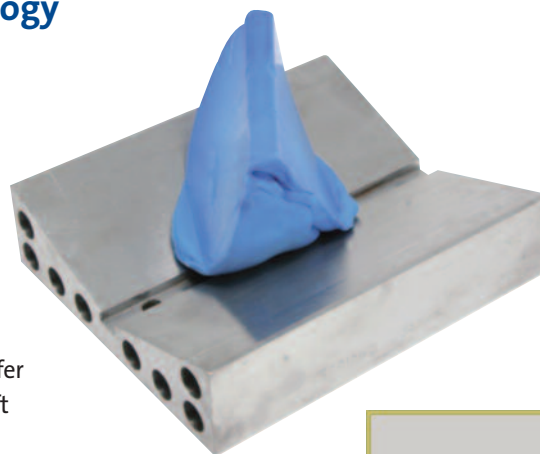
Leading edge technology

All gears deflect and distort under load, this can result in rapid wear unless correction is applied during manufacture of the gears. Contact prediction software developed by Renold ensures the correct contact position required for the application is achieved electronically, prior to manufacture, to ensure the worm gears are produced in the fastest possible time and that they are correct first time.



Reverse engineering technology

Many large worm gears need to be manufactured to particular requirements, or paired up with a worm shaft already manufactured. Renold have devised the "Slug" a unique method of taking a profile from a wormshaft on site anywhere in the world, returning the slug to Renold and replicating the profile. State of the art measuring techniques are used to transfer the profile to a new replacement wormshaft or a master wormshaft to which a replacement wormwheel can be manufactured.



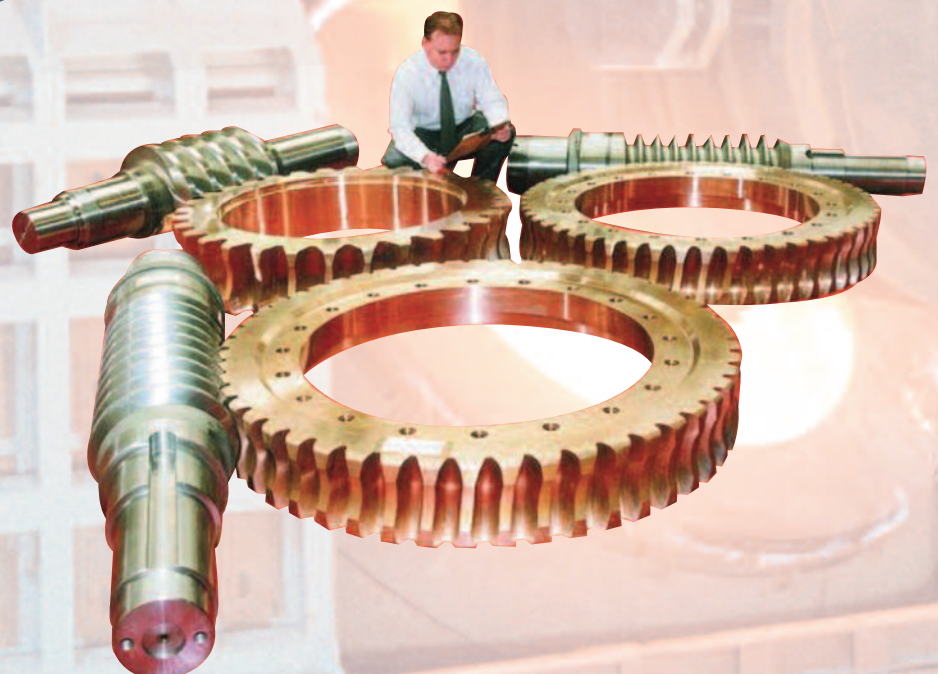
Steel manufacture - screwdown gears

Renold supply large worm gear sets for screw down applications in steel mills.

These huge machines crush steel billets to smaller sections.

The worm gears require great strength to form the steel and this is achieved using worm gears with huge gear teeth and massive wheel face widths.

Manufactured for leading steel industry customers, Renold has a wealth of experience producing these gears for steel mills around the world.



Mineral processing - ball mill grinders

Renold supply tough worm gears for ball mill grinders, designed to grind minerals in the extractive industries around the world. The ability to withstand huge powers, linked to massive shock loads, is paramount in this application .

Renold worm gears are ideal due to their high specification materials and industry leading manufacturing technology.



Power generation - coal pulveriser gears

Renold supply huge centre distance worm gears up to 48" (1220mm) gearing centres, which are fitted in the coal pulveriser gearboxes of fossil fuel power stations world wide.

Fitted as replacement gears, Renold are able to manufacture separate wormwheels to match with the original wormshaft. This is done using a unique reverse engineering method where a plastic impression is taken of the profile enabling an exact replacement gear to be created back at the factory.

In many instances a replacement wheel can be manufactured whilst the original gear is still being used.

Replacement Worm Gears for CE Coal Pulverizers		
Worm Gear Size Center Distance	Gear Ratio	Mill Size CE Mill No's
48.010"	13 3/7	943, 923, 903, 883
	18 3/5	863, 843, 823
41.010"	17 1/5	803, 783, 763
36.010"	13 5/6	753, 733, 713
	15 1/5	703, 683
	16 1/5	743, 723
30.010"	12 2/5	673
	14 2/5	663, 643
27.010"	10 4/5	633, 613, 593
	13 1/2	623, 603, 583
21.847"	9 2/5	573
	11 3/4	563, 543
	13 3/4	533, 533A
	15	523, 503,

Typical replacement gears sizes and ratios as used in Coal pulverisers with Mill size CE numbers used for reference.



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