

SKF



**What does the
Oil Injection Method
and 5 hours
of algebra have
in common?**

**Nothing...
anymore!**

$$\sigma_{bi} = \frac{34}{1-0.29} \sqrt{3(1+0.29)^2 + (m_{bi}-2)^2}$$

$$= \frac{4}{d} - 0.007 \sigma_s \left(1 - \frac{d}{2p}\right) 10^{-3}$$

$$\sigma_p = (\Delta_i + 4H) E \frac{1 - \left(\frac{da}{d}\right)^2}{2da}$$

$$\sigma_0 = 147$$

$$\frac{1-0.72}{3+0.74}$$

$$\frac{147}{0.72} \sqrt{3+0.74}$$

W

hen using the SKF Oil Injection Method, detailed mathematical calculations must be performed for each application. In the past, these complicated calculations were executed manually, often taking many hours to complete. SKF has revolutionised the method by designing a computerised program which fully automates the technique, making these laborious calculations simple and easy to compute. The new easy-to-use computer program - now available on CD-ROM - gives you full access to all the advantages of oil injection at the click of a mouse. What once took hours of difficult arithmetic now takes literally minutes thanks to this new CD-ROM developed by SKF.

The CD-ROM provides you with detailed instructions and practical information on how to use the SKF Oil Injection Method for mounting and dismounting bearings, as well as using the method in design, calculation and application of shrink fitted components.

The CD-ROM is a powerful tool which includes the following features:

- User-friendly calculation program to determine pressures, stresses and interference levels
- Explanations of the theoretical background
- Information on designing components
- Information on SKF products which enable the Oil Injection Method to be used
- Practical experiences and application examples
- Complete SKF Drive-Up Method program for fitting SRB, CARB and Explorer bearings in a safe, rapid and controlled manner
- Information on related SKF products such as gauges, heaters and pullers

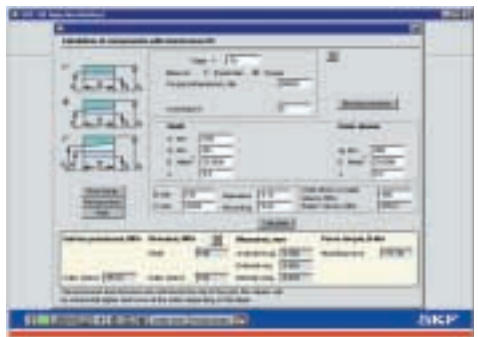
In addition the program includes animations, photographs, detailed product information and instructions-for-use, as well as video clips showing various methods and techniques.

The benefits of using the SKF Oil Injection CD-ROM include:

- Substantial time & cost-savings
- Elimination of arithmetic errors
- Ability to see the effects of design changes in seconds
- All information on Oil Injection gathered on one CD-ROM
- Quick and easy access to all the advantages of the Oil Injection Method

The advantages of the SKF Oil Injection Method include:

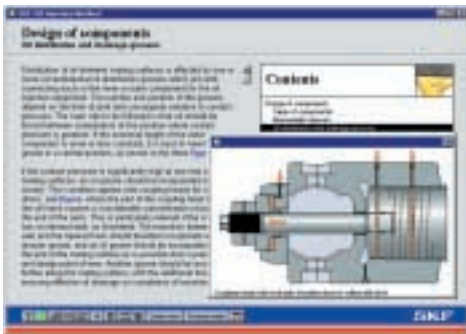
- Saving time and money in materials, production and maintenance operations
- Fitting and removing shrink fitted components in a safe, controllable and rapid manner



Developed by SKF in the 1940s, the Oil Injection Method allows bearings and other components with an interference fit to be fitted and removed in a safe, controllable and rapid manner. The method does not require keyways to be machined on the shaft, saving valuable time and money in materials and production. Interference fits (also known as shrink fits) have long been recognised for their reliability in transmitting large torsional loads. Very often interference fits offer the only solution when connecting hubs to shafts with intermittent or fluctuating loads.

When using the SKF Oil Injection Method the mating surfaces are separated by a thin film of oil injected under high pressure, thereby virtually eliminating the friction between them. This enables interference fits on cylindrical shafts to be overcome and the fitted component removed quickly and effortlessly. The method is even more versatile when used on tapered shafts, as it can be used for both mounting and dismounting the fitted components. The method, which is used for many bearing applications, can also be found in other applications, such as:

- Couplings
- Gear wheels
- Railway wheels
- Propellers
- Built-up crankshafts



The wealth of experience and knowledge within SKF has enabled the development of a comprehensive programme of high performance oil injectors, pumps and accessories which allow users of the SKF Oil Injection Method to derive maximum benefit from this smart, reliable and now easy-to-use technique.

If you want to simplify your daily work, please contact your local SKF office for your personal copy of the SKF Oil Injection CD-ROM or send an e-mail to info.mapro@skf.com



In line with our policy of continuous development of our products we reserve the right to alter any part of the above specification without prior notice.

SKF Maintenance Products

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