Modernization

NIEHOFF – your partner for modernization

Expertise, Customer-driven, Service – in Good Hands with NIEHOFF

NIEHOFF GRUPPE

Modernized for top performance
Modernization of machines and lines

For NIEHOFF, designing and manufacturing of machines and lines have always been focused on quality, reliability, robustness and durability. That is the reason why NIEHOFF machines which have already been in operation for decades are also worth a general reconditioning performed by NIEHOFF specialists. On the basis of calculations and tables, NIEHOFF is able to prove reliably for each specific case which concrete performance improvements can be achieved through modernization.

Technical competence, original documentation, OEM quality

NIEHOFF specialists have the ideal qualifications to recondition NIEHOFF machines appropriately. For drawing machines this is particularly necessary for bearings and seals, and in general for the control technology and the design of control cabinets. The NIEHOFF specialists have access to well-maintained documentation and therefore to all relevant data. They are also fully familiar with the underlying machine technology. Because of their experience, NIEHOFF specialists can handle all customer-specific particularities. This applies practically to all NIEHOFF machines including refurbishments which were made by customers at their NIEHOFF machines. The spare parts required for each reconditioning job are produced in-house on cutting-edge machining centers to OEM quality. The spare parts therefore meet the same high requirements as parts for new machines.

Drives and controls

In many cases the modernization of a machine will come into consideration if the drive technology is defective and certain components, for example three-phase power controllers or converters, are no longer available. In these cases, it also makes sense to equip a machine with new AC motors, which are maintenance-free and work more energy-efficiently than the former DC motors.

A further measure is to modernize the control system, to install new control panels which allow an intuitive operation, and to update the control software. Sometimes it is also recommended to modify the control cabinet and to equip it with a stronger cool-fan, for example. For the users of NIEHOFF systems it is advantageous that NIEHOFF develops in-house all kinds of electronic controls. These controls are ideally adapted to the individual applications and help to optimize manufacturing processes and to reduce costs. One example in this context is the NIEHOFF Annealing Controller (NAC) for continuous resistance annealers.

Multiwire drawing machine type MMH before being reconditioned by NIEHOFF

Example for a modernized multiwire drawing machine type MMH

Procedure
When planning a modernization project, first NIEHOFF technicians inspect the machine or line in question at its place of operation and draw up a quotation. The reconditioning of rod breakdown lines and smaller stand-alone machines like spoolers and bunchers is usually performed at their operation site. Multiwire drawing lines can also be reconditioned at the customer's facility without any problems or are modernized in the large workshop halls at the NIEHOFF headquarters or at one of the subsidiaries with an own production facility.

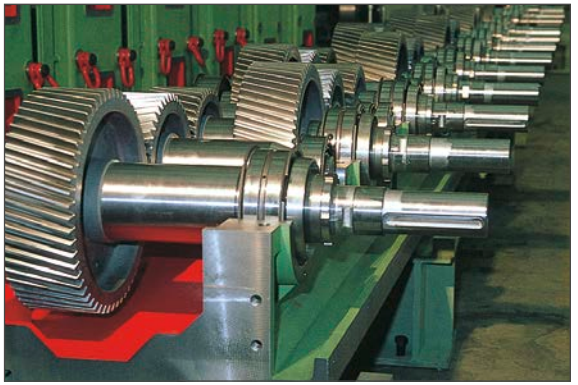
Example for the modernization of a rod breakdown line
One of the projects concerns a rod breakdown line type M 85 which was put into operation in 1966. Since then the machine has been in operation for approximately 300,000 hours.

The procedure
- The machine is dismantled into its components on site
- Gearboxes are checked and cleaned
- Bearings and sealings are replaced
- Gear wheels are checked, cleaned and replaced if needed
- Piping systems for drawing emulsion supply and oil supply of the bearings are checked, cleaned and repaired if necessary

Parallel with the work at mechanical components the drive and control systems are updated. After assembly the machines are subjected to test runs and put into operation again.

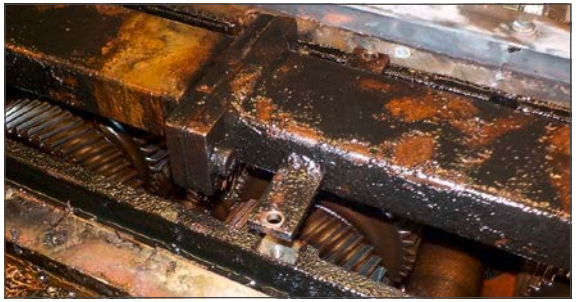
Conclusion: It's worth it
Machines which have been modernized in such a way are not only as good as new, but often reach an even higher level of productivity than before. Therefore, it is worthwhile to subject NIEHOFF machines to a general reconditioning even after decades of use to put them into tip-top condition again.

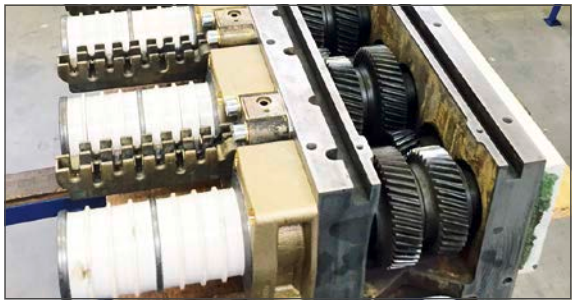
Rod breakdown machine type M 85 before being reconditioned by NIEHOFF



Reconditioned gear of a rod breakdown machine type M 85

Example for a reconditioned rod breakdown machine type M 85





Basic procedure using the example of an MMH

- The MMH is inspected (approx. 1 day)
- Spare parts and the extent of the reconditioning are defined
- The order for spare and wear parts is placed
- Dates are arranged (customer and NIEHOFF service team)
- Special tools are provided free of charge (shipping costs excluded)
- Modernization works are performed
- All parts are cleaned, e.g. gear box, lubrication tube, gearwheels and shafts
- Bearing temperature, leak tightness and operability of the machine are tested
- Machine is put into operation with a test run at the customer's site

Your benefits

- We grant a 24 months warranty for modernization works accomplished by NIEHOFF engineers upon conclusion of an inspection contract
- Increase in efficiency through the replaced bearing, sealings, etc.
- No downtimes (damage of bearings) through mechanical damaging of the shafts, gearwheels and bearings

NIEHOFF service

- Mechanical reconditioning of drawing machines, annealers and spooling systems
- New control units and upgrade to AC technology
- Upgrade of the annealing current controller to NIEHOFF NAC standard
- Upgrade of the line control
- Integration of a new annealer into an existing drawing line

Fig. at the top: Gearbox before being reconditioned by NIEHOFF
Fig. in the middle: State of an old machine (11/95 see imprint) with 100,000 operating hours
Fig. at the bottom: Reconditioned gearbox (new bearings, sealing flanges and labyrinth seals)

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