Automatic hardness testing of ***flame-hardend valve shaft ends***

The Turkish company Supsan requests automatic hardness testing of valve shaft ends after flame-hardening.

An essential point of this test task is the request to check not only hardness, but also hardening pattern of the shaft ends. Sorting criteria are O.K., TOO HARD and TOO SOFT.

Control of the entire valve testing is done via ***eddyliner®*** *and shift register. Exactness required of hardness values is +/- 1 HRC. The enclosed photos are intended to give an impression of the test system.*

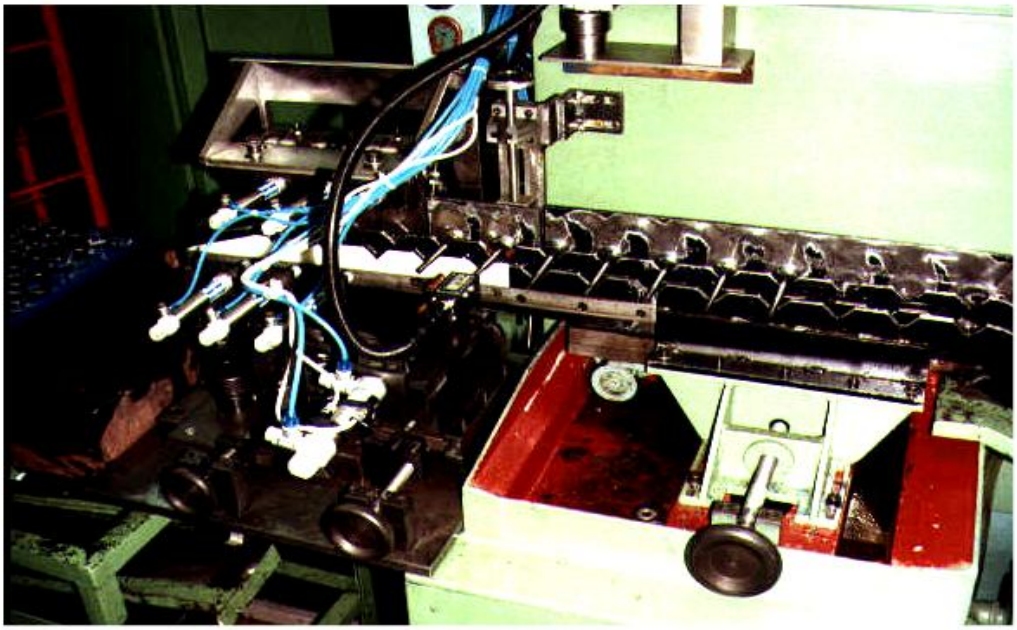
Testing procedure is as follows:

- *The parts reach the hardening machine via rated belt and go on to the subsequent test coil.*

- *The coil automatically passes over the shaft ends to carry out testing according to the determined parameters. Depending on the sort decision, the shaft ends are assigned to the relevant output O.K.,TOO HARD or TOO SOFT, or to a fourth output if none of these classifications is applicable.*

Since April 1993 the test system described above has been in operation to the full satisfaction of our customer. Besides hardness check also material mix-ups and similar defects will be detected reliably.A second test unit was sold to another manufacturer of valves for a similar application.

- *automatic test at the hardening machine*
- *Sorting o.k. (57 - 54 HRC), too hard (> 57 HRC),too soft (< 54 HRC),residual class*
- *Control of all functions by* **eddyliner®** *and integrated shift register*
- *Resolution of hardness values to ± 1 HRC*



Cycle band and test coil

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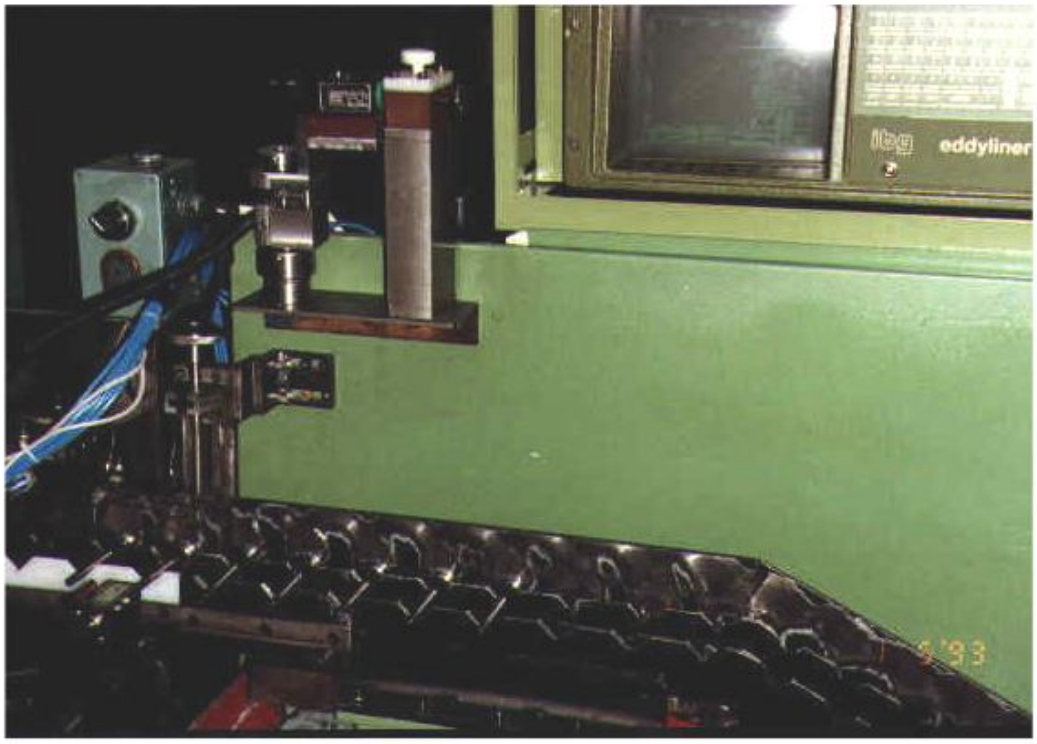
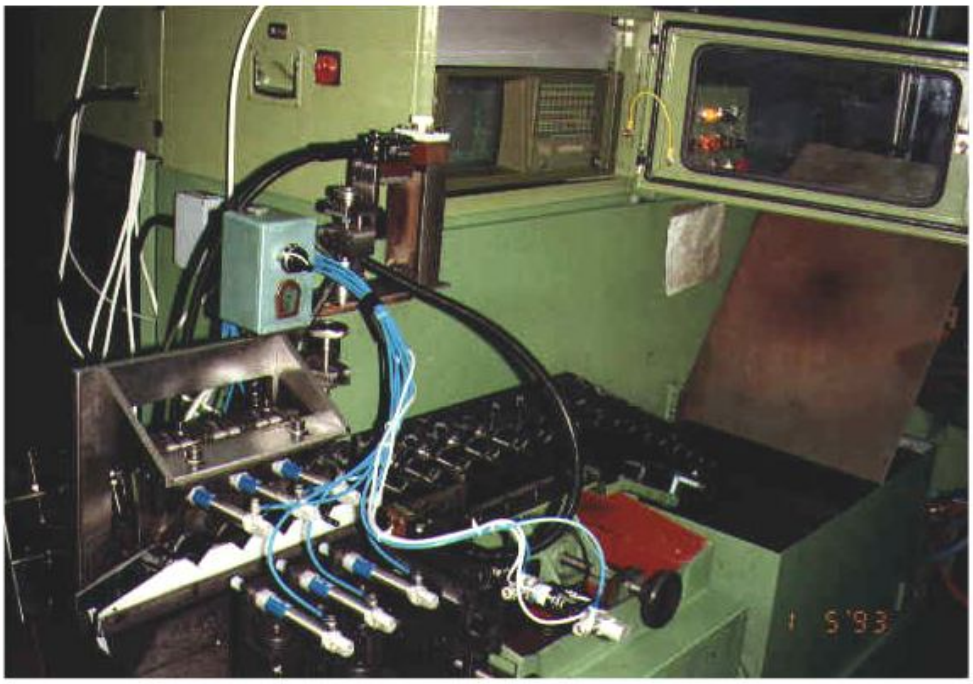


eddyliner® *with test coil and compensation coil*



General view and view on eject cylinders (sorting system)

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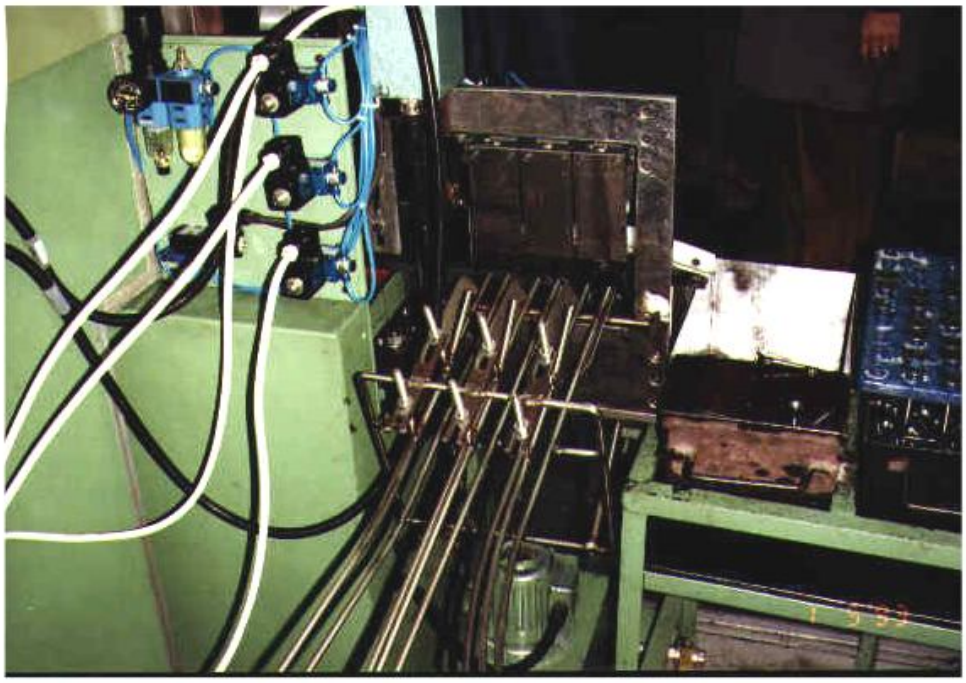

Rear of sorting system with view on 3 sorting channels and pneumatic valves
Residual class is taken to the steel box on the right

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