

Special Application of DRO System for Inspection of Camshaft profile.

An esteemed customer of Electronica Mechatronic Systems, based in Nasik who is in manufacturing of automotive camshaft, was having an inspection instrument which was used to check profile of Camshaft. This instrument was operated manually and they were using calculated data to measure the angle.

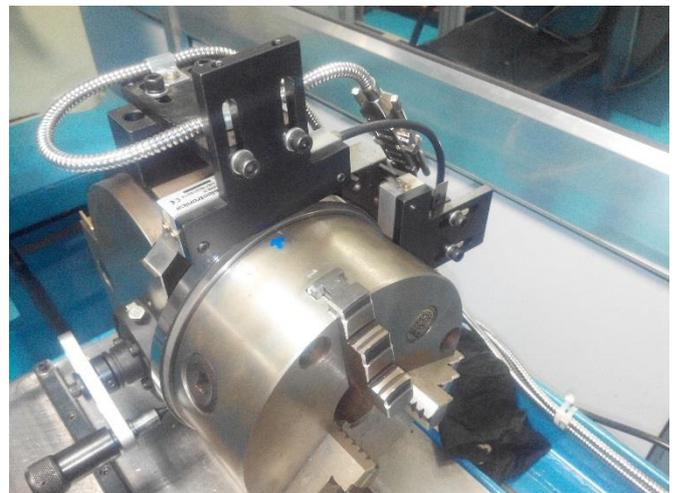
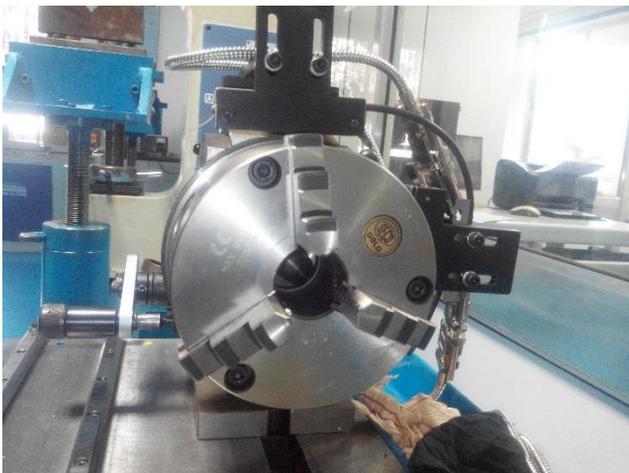
There were few **drawbacks** of this mechanical system.

1. The Quality Inspectors were using their experience & skill to do this process. Due to this there was major possibility of mistake in processing when the Quality Inspector gets changed
2. If calculation goes wrong & it took more time to measure the angle as the Quality Inspector has to start measuring angle from beginning.
3. Due to all these issues, measuring angle was very skillful & tedious job for any Quality Inspector, and this process was more man oriented process.

As we, Electronica Mechatronic Systems, are renowned for magnetic tapes & DROs in industry, the Quality team of this company approached us. They requested us to give solution to increase the efficiency & accuracy of the instrument. They further requested us to reduce inspection process time.

Our Sales Engineer along with our 'Service & Application executive' went to the customer work site to see & study the instrument. It took only 1 day to study all specifications & working process cycle and to give solution on it. It took total 3 days to study, install & demonstrate the system to customer.

The solution given to customer consist of a system named as **EL360A**, in which EL360 DRO, two Reader Head of 50 micron (Master & Slave reader head) and magnetic tape of 5mm Pole Pitch to capture the data and to show rotary angle of Indexing Head. There was another **S1 type magnetic scale of 5 micron with EL300 DRO** installed which was giving distance between camshaft center and highest point of cam profile.



There were many **advantages of EL360A** over current method.

1. Elimination of skilled inspector dependency: due to our system semi-skilled inspector also can check camshaft.
2. Ease of operation
3. No calculation needed, angle is displayed on DRO directly.

This system was installed in January 2015 and since then, it is running satisfactorily without any problem.



The system is very useful to customer, as it decreased inspection process time & increased production output. Also due to this system, dependency on inspector is decreased and due to simplicity in operation, quality of product is improved and thus increased brand of company in market.