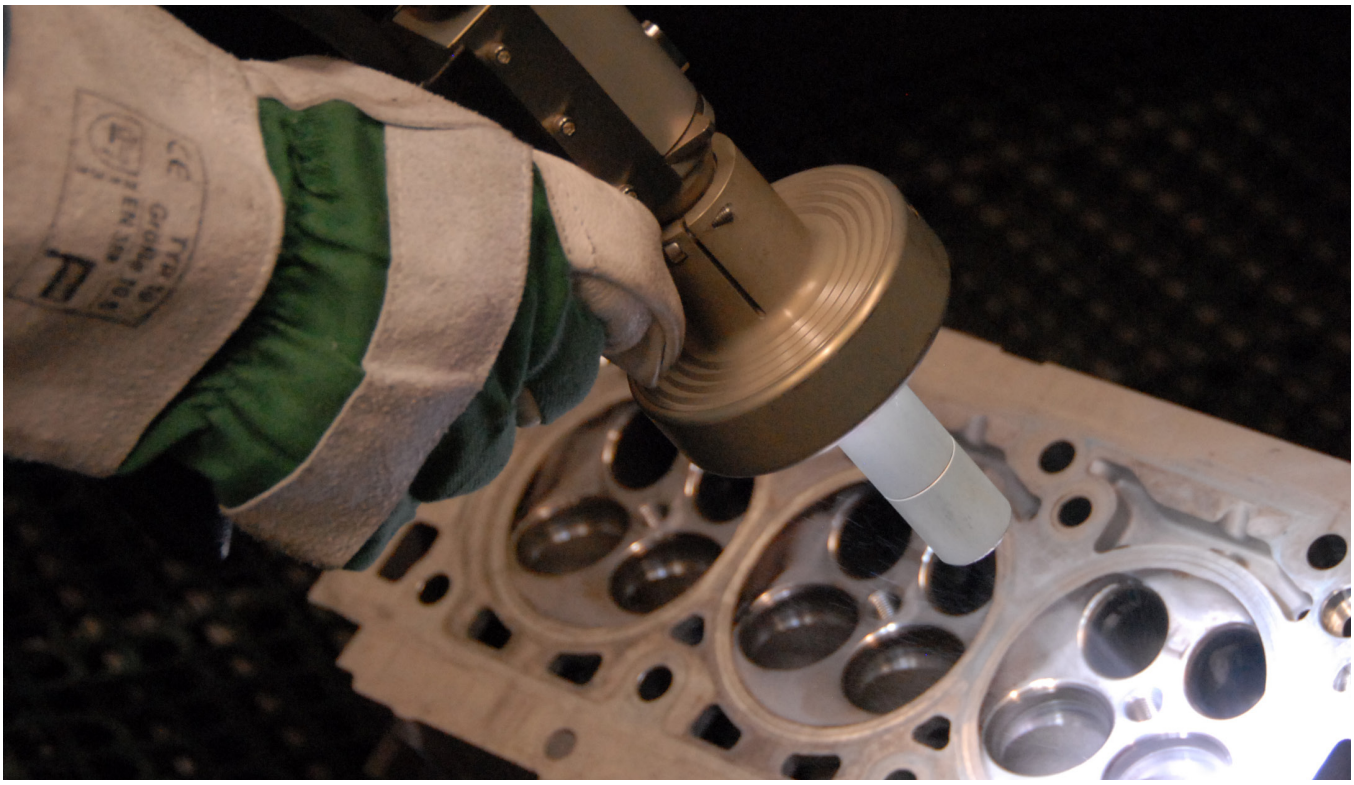
ASCO Dry Ice Blasting Technology in Motor Development and Measurement and Test Engineering



Optimal cleaning for optimal measuring: in this case a cylinder head

In the motor development of passenger cars at the works in Untertürkeim, Germany Daimler applies the dry ice blasting technology of the Swiss company ASCO CARBON DIOXIDE LTD.

It is essential, that various motor components such as pistons, cylinder heads, oil pans and crankcases are cleaned gently from silicone residues, oil, grease, ashes and other contamination or sealing compounds. Due to the fact that these components are measured before and after tests in the geometric measurement and test engineering, it is important that they are cleaned gently after the tests and that the measured data are not adulterated due to an abrasive cleaning method.

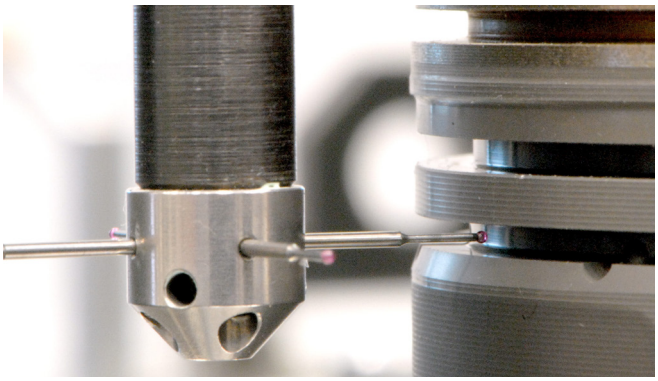
The dry ice blasting technology has the advantage that it is gentle and therefore it does not damage the surfaces in any way. As an alternative only complex manual cleaning methods or cleaning by using solvent could be taken in to consideration, however, they would be much more time-consuming. Even more important than the timesaving during the cleaning process is the assurance that the components are utterly clean after one cleaning process.
Every double-measuring and secondary cleaning which are required due to not completely clean components mean a loss. By using the dry ice blasting technology there is assurance that the components are utterly clean after one cleaning process.

Dry ice blasting technology in the measurements and test engineering.

Consequently, the dry ice blasting technology is not only an easy and fast cleaning method which does not damage components, furthermore it is also a method which supports the process planning.

A special case is the cleaning of pistons, their narrow ring groove cannot even be cleaned measurably with dry ice. Thanks to a mounted crown of light on the gun a solution was found, that this ring groove can be primary cleaned with dry ice so that the rest of the contamination can be removed in the ultrasonic bath afterwards.

ASCO and Daimler look back on a long and close collaboration in the field of the dry ice blasting technology, so that the dry ice blasting technology of the application field at Daimler can be further developed and optimized continuously and individually in an open dialogue.



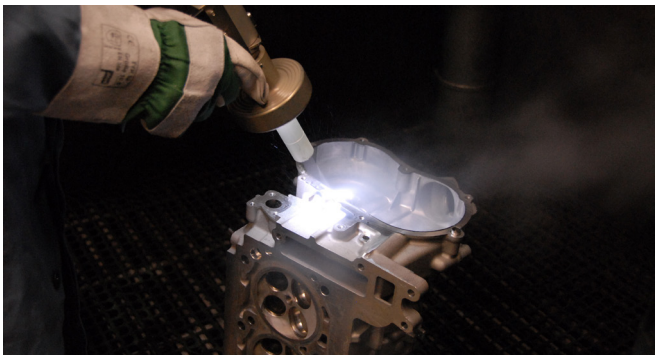
In the Measurements and Test Engineering it is measured meticulously precise like e.g. this piston ring groove.

Thanks to the mounted crown of light on the gun, the narrow ring groove can be illuminated in an optimal way while cleaning.

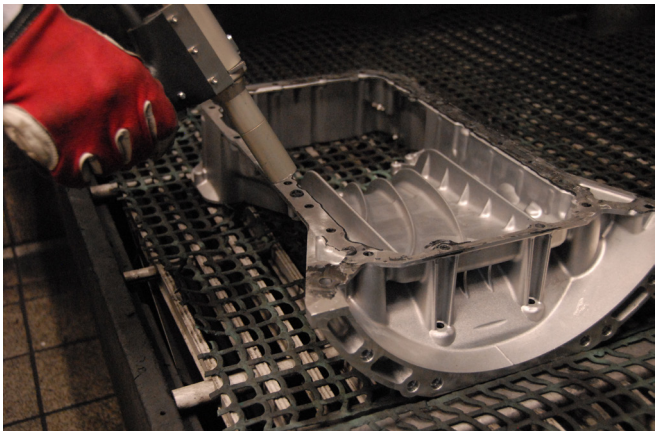
About ASCO:

ASCO is a provider of complete CO_2 and dry ice solutions with customers worldwide. The product range includes CO_2 production and recovery plants, dry ice blasting units, dry ice production machines, CO_2 cylinder filling systems, CO_2 vaporisers, CO_2 storage tanks, CO_2 dosing systems for water neutralisation and various other CO_2 and dry ice equipment. Thanks to this broad product range and more than 130 years of practical experience in the wide field of CO_2 and dry ice, customers profit from individual, complete CO_2 solutions from a single source.

Since 2007 ASCO has been part of the international industrial gas enterprise Messer Gro up and is its competence centre for CO_2. By joining forces with the German BUSE Gastek GmbH & Co. KG, based in Bad Hönningen, in the year 2014, the expertise and product portfolio was pooled and significantly expanded. This applies in particular to the complex field of CO_2 recovery. To achieve optimum customer support in North America, the US subsidiary ASCO CARBON DIOXIDE INC (ASCO Inc.), based in Jacksonville / FL, was founded in July 2016.



Cleaning of a cylinder head.



Cleaning of an oil pan.

Piston before ....

... and after the cleaning with dry ice.

ASCO
All about CO_2

We supply:

- CO_2 Production Plants
- CO_2 Stack Gas Recovery Plants
- CO_2 Gas Recovery Systems for Dry Ice Machines
- Dry Ice Slices / Block / Pelletizer Machines
- Dry Ice Blasting Systems
- CO_2 and Cryogenic Static and Transportable Tanks
- CO_2 Pumps and Cylinder Filling Systems
- Atmospheric CO_2 Vaporiser
- CO_2 Detectors
- CO_2 Flowmeters
- Low to Low Pressure CO_2 Transfer Pumps
- CO_2 Testing Equipment (Dew-Point / Purity / Carbonation)
- CO_2 Equipment

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