

Automobile Industry

CASE STUDY

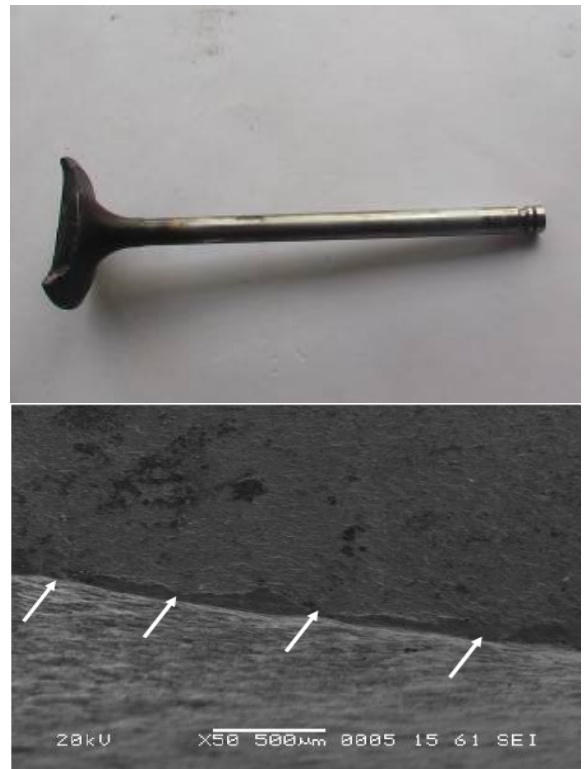
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Key Facts

Sector	Automobile
Category	Investigation on Failed Diesel Engine Valve

Problem

- Frequent valve failures in six cylinder diesel engine of 25 ton truck which is made of En-52 with medium carbon low alloy steel having Silicon and Chromium.
- The Failure was taking place on head and stem.

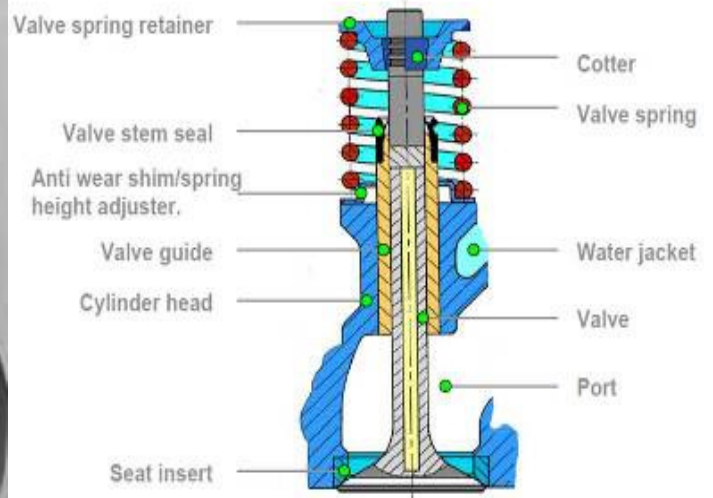


Diagnosis

- The failure of the valve is due to corrosion fatigue cracking on account of improper heat treatment done which imparted poor mechanical & metallurgical properties.



Valve Assembly:



Solution/Recommendations

- The valve shall be properly hardened & tempered in order to achieve fully tempered martensite microstructure without any traces of ferrite
- The hardness shall be maintained in the stipulated range.
- Recommended to find out the source of sulfur and avoid the use of that fuel.

Contact Us

If you are interested to learn more about TCR Advanced,
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