

ANTI-RUST MOVE

Steel Your Car With Zinc Coat

Centre drives plan to make galvanised steel mandatory in Indian automobile production

BY ARINDAM MUKHERJEE

YOU could soon be saved from a major problem that blights your automobile—corrosion and rust. This is more evident if you live in a region that gets heavy rainfall such as the Northeast or if you are from the coastal areas buffeted by salty sea winds. The salt-laden moisture blown from the sea is a catalyst that accelerates the corrosion process, thereby reducing your car's life and depreciating its value. Is there a solution to stop the decay or shield the cars from the elements? The answer is galvanised steel, the one with an anti-rust, protective zinc coating. Problem is all domestic production cars are made currently with non-galvanised steel. That's what the government is intending to change; and throw a lifeline to millions of automobile owners in the country.

The Union road transport ministry is considering a proposal to make it mandatory for the automobile industry to use only galvanised steel. The government has asked leading automobile safety and engineering institutions such as the International Centre for Automotive Technology (ICAT), Manesar, and the Automotive Research Association of India (ARAI) in Pune to send inputs and recommendations for the plan. The proposal will then go to a standing committee of Parliament before a final call is taken.

"Although there are 150 steel standards, vehicle steel has no standards in India. We adopt European standards. Cars with a value of less than Rs 10 lakh have the minimum galvanisation. This proposal was submitted to the government on the premise that galvanisation will increase life of a vehicle against corrosion and rust. I have advised the ministry to improve standards to reduce fatalities in road accidents through this. The technical standing committee will eventually set standards on galvanisation and make it compulsory," says Veerendra Singh Rathore, technical advisor, road safety, ministry

Galvanised steel, a must abroad, will shield cars from rust, corrosion. Make them last longer.

of road transport, and the person behind the proposal. Once this is done, this will become the automobile industry standard.

The ministry has also written to the Society of Indian Automobile Manufacturers (SIAM), the holding union of car manufacturers in India, this December and sought their views on the subject. SIAM's response is awaited.

At present, less than 30 per cent of the steel used in cars is galvanised and that too is not on a regular basis across car manufacturers. In export models, the amount of galvanisation is often around 70 per cent. This is primarily because Europe and the US have stringent rules mandating galvanisation of automotive steel. Flat products, such as hot rolled, cold rolled and coated steel sheets, account for about 80 per cent of steel products consumed by the auto makers. Steel is used for roof, chassis, wheels, brakes, exhaust and engine.

In 2015, IIT Bombay carried out an extensive study of automotive body corrosion in Mumbai and adjoining areas to track corrosion performance of currently used materials in India-made cars valued at less than Rs 10 lakh. The study adopted methodology similar to the one used in North America to check for visible perforations, paint blisters, and surface red rust. The survey was conducted in coastal and other humid regions of Mumbai. The results were surprisingly

similar to those seen in a Detroit survey despite the fact that no road de-icing salts are used in Mumbai. The IIT report proved there is a corrosion problem affecting the durability and the eventual safety of cars in India. This is particularly visible in all coastal and high-humidity areas.

"In India, regulations are weak and carmakers are taking advantage of that. Cold-rolled sheets have to go through a seven-round cleaning process which can be totally avoided if galvanised steel is used. This can neutralise any costs that accrue because of galvanisation. There is also no impact on the weight of the car as the total thickness (of the zinc layer) is of 40 micron, which will add only around a couple of kilograms to the weight of the car," says Prof Anand Khanna of IIT Bombay who headed the Mumbai study.

ALSO in India, most car owners get an underbody and body coating done to prevent corrosion at a cost of anything between Rs 4,000 and Rs 8,000. According to experts, this can be avoided if galvanised steel is used by carmakers. What's more, the net cost burden on consumers would be under Rs 10,000 if steel in a car was to be galvanised and the results are far better than the coating that lasts only two to three years. Galvanisation lasts a vehicle's life.

There are many advantages for carmakers as well, apart from the savings on cleaning the CR

WHAT'S MISSING? Less than 30 per cent of steel used in Indian cars is galvanised

sheets. Rahul Sharma, director, India, International Zinc Association, says: "Paintability in galvanised steel is much better than plain cold-rolled steel. It can be taken straight to the paint shop instead of going through a cleaning process." Galvanisation is required in a car chassis, wide body and nuts and bolts. But just 30 per cent galvanisation is there in the chassis of Indian cars, he adds.

It is also a fact that India has abundance of zinc. "India produces sufficient zinc. Its availability will never be a problem for either the steel industry or auto industry. Galvanisation of steel used in car body enhances the life of a vehicle multifold...your recurring expenditure on repairs decreases and your safety increases. Use of galvanised steel in cars will definitely add to the safety of passengers and bring enhanced value to the cars. The new mega infrastructure development that is happening in India today, with the use of steel, should only use galvanised steel for strength and long life," says Sunil Duggal, CEO of Hindustan Zinc Limited, one of the world's largest zinc manufacturers.

While a lot of thought is going towards various aspects of road safety, it is surprising that India still follows old and archaic rules when it comes to automotive steel. Perhaps the government and its committees will act on this soon and mandate zinc coating of vehicles to make them stronger and reduce fatalities in road accidents. 



THE THIN BUT TOUGH SHIELD

- Government considering proposal to make galvanisation mandatory for automobile steel
- Galvanisation already mandatory in Europe and the US
- India has no standards for steel to be used in automobiles
- Galvanisation can prevent corrosion and rust in vehicles and prolong their life. It can also reduce fatalities in road accidents
- Coastal and high-humidity areas are prone to corrosion in automotive steel, thereby reducing a car's life and value
- Government has sought views of ICAT, ARAI and also SIAM on using galvanised automotive steel

SOUMIK KAR