Summary of IS 17042 (Part 1) : 2020 Diesel Engines — NOx Reduction Agent AUS 32 Part 1 Quality Requirements

In order to protect the environment, keeping the air quality as clean as possible, exhaust emissions regulations around the world have been strengthened considerably. In motor vehicles with diesel engines, particulate matters (PM) and nitrogen oxide (NOx) emissions are the main concern, and efforts have been focused on the development of technology which can reduce them effectively with minimum fuel economy penalty.

IS 17042 (Part 1) : 2020 defines quality standards for AUS 32 (an aqueous urea solution) used in diesel engines to reduce nitrogen oxide (NOx) emissions via Selective Catalytic Reduction (SCR) technology. AUS 32 is essential for SCR systems, which work by injecting this urea solution into the exhaust stream, converting NOx into harmless nitrogen and water vapor, thus reducing pollution from diesel engines. Selective catalytic reduction (SCR) converters using urea solution as the reduction agent are considered to be a key technology for reducing NOx emissions.

IS 17042 (Part 1) specifies rigorous quality requirements for AUS 32, including its urea content, refractive index, and strict limits on contaminants such as biuret, aldehydes, and metals like aluminium, calcium, and iron. This helps ensure that the AUS 32 used in SCR systems maintains high performance without causing harm to engine components.