

# High power industrial laser cleaning studies and applications

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Large volumes of chemicals are used in lots of industries in various cleaning applications, causing serious environment pollution. Other traditional industrial cleaning methods, i.e., manual polishing and sand blasting, are highly labour costive and dusty. Laser cleaning is drawing increasing attention nowadays due to its pollution free, flexible operating modes and selective precision cleaning capability. This presentation introduces a laser-based technology for removal of carbon deposits, paints, primer, releasing agents, metallic oxide, and thermal barrier coatings from various substrates including composites, aluminium alloys, nickel alloys, steels, titanium alloys. Study of different laser cleaning applications is presented, including substrate surface property comparison before and after laser cleaning and temperature increasing of the substrate during laser cleaning.