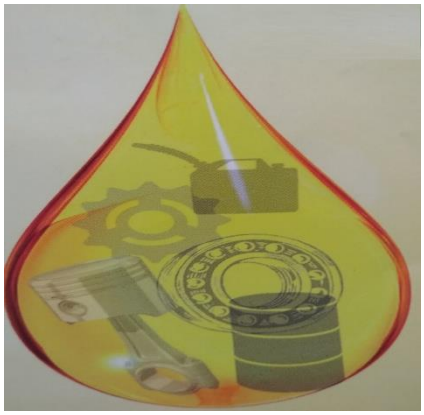

Webinar Title: **OIL & WEAR DEBRIS ANALYSIS**

Expert Speaker (Name/ Designation) – Dr.S.K.Chakravorty, Ex DDG (TS), NPC

Webinar Date: 23rd September 2020 | **Duration: 1 Hr 15 min**

About Webinar (Brief One Para): - Analysis of Physicochemical properties, contaminants and Wear debris in lubricating oil in an industry is an aspect of condition monitoring which has now reached an important stage in its development. The prediction of degradation of lube oil and the contaminants build up in the oil in use can help in optimizing oil change periods and prevent premature failures of machines. The history of wear process taking place in equipment is recorded in the wear debris. Wear debris analysis involves the monitoring of lubricants from different equipment for the presence of wear debris. The debris is generated by wear processes at the relatively moving surfaces of load carrying machine components such as bearings, gears, cams & tappets, seals & packing, piston rings & cylinder liners, bolted & riveted joints, etc. Careful examination and quantitative assessment of the concentration, weight, number of particles or particle morphology collected in a sample can provide early indication of impending failure. This technique helps in implementing Proactive Maintenance of equipment by predicting root cause of failures, increasing equipment reliability, mean time between failures (MTBF) and component and equipment life. Thus by applying this technique, substantial savings can accrue to our industry by way of higher plant availability & capacity utilization, reduction in operating costs through savings in energy and extended life of plant & machinery.

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Webinar Coverage: - The objective of this programme is to discuss the principles and techniques of lubricating oil analysis (physicochemical properties and wear debris generated and contained in the oil sample). The parameters to be tested and their limits will be discussed so that optimum oil change periods can be established and the impending failures of machine components can be predicted. This will help the maintenance engineers to reduce lube oil consumption and increase reliability of machines.

Speaker Profile (Brief One Para & Photograph):- PhD (Production Engineering) from Jadavpur University, M.Tech (Chemical Engineering) from IIT Kanpur. Specialised in: Advanced Maintenance Management Systems & Techniques from Sweden; Industrial Tribology & Lubrication Management from National Tribology Centre, UK; Total Productive Maintenance from JIPM, Tokyo; Condition Monitoring Systems from IIT Madras & IRD Mechanalysis, UK; Hazop/Hazan & OHSAS from University of Manchester, UK & DNV India. Have 40 years of experience in consultancy & training in

various subjects of Maintenance Management including used lube oil analysis for condition monitoring of lubricating oils as well as for predicting failures of machine components. Retired as Deputy Director General (Technical Service) from National Productivity Council of India. Presently working as consultant for industry associations, like-Alkali Manufacturers Association of India (AMAI), Federation of Indian Chamber of Commerce & Industry (FICCI), National Productivity Council (NPC), etc.

Register to learn (Key Learnings' in bullet points):

- Advantages of oil & wear debris analysis.
- On-site & Off-site oil analysis.
- Sampling procedure.
- Deterioration of oil in service.
- Physicochemical properties of lubricants.
- Warning & rejection limits for used lubricants.
- Economic benefits of oil analysis.
- Techniques of WDA (SOAP; Ferrography; Particle Counting; Magnetic Plug; etc.)
- Case studies.

Date: - **23rd September 2020**

Time: - 03:00PM to 04:15PM

Register in advance for this webinar:

Thanks & Regards

Name of RD/ Group

National Productivity Council

Regional Directorate

Kabir Bhavan, GT Road

Kanpur-208005