Structured Monitoring of Refinery Catalyst Resources

Nynas is a different kind of oil company. We use oil to create sustainable value. Our business is specialised oil applications and within our field we’re a world leader. We have over 800 employees, we maintain production facilities in Europe, North and South America and have offices in some 30 countries. All this generates a € 2 billion turnover and stable growth.

Background
Nynas produces naphthenic oil for three main segments. Insulating oil is mainly used to insulate and cool transformers, process oils are predominantly used in rubber, adhesives and printing ink, while base oils are suitable for e.g. metalworking fluids and other industrial lubricants.

The technologies used for producing naphthenic special oils at the Nynas Nynäshamn refinery are hydrofinishing and severe hydrotreating. They are based on passing a mixture of oil and hydrogen through a reactor filled with grains of aluminium oxide, the surface of which is covered by a catalytically active metal. In severe hydrotreating and hydrofinishing, nickel and molybdenum are used. The reaction between the oil molecules and the hydrogen takes place on the surface of the catalyst.

Project
Catalyst assets are bottleneck resources within Nynas manufacturing organization and their performance will have a direct impact on the corporate bottom-line. Therefore, Nynas Manufacturing would like to initiate a Masters Thesis project in order to develop our catalyst condition monitoring process. This work will include:

- Literature studies within the area of catalyst condition monitoring
- Benchmarking against other petrochemical manufacturing companies
- Collaboration with catalyst experts at suppliers and hydrotreating experts within Nynas
- Development of an integrated monitoring framework to be implemented at Nynas.

Finally, this project will be an opportunity for you to add value to Nynas Manufacturing. At the same time it will provide you with the feel of how working for a multinational petrochemical company can be. Your Master Thesis work will start September 1st 2013.

For further information please contact:

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Please send your application no later than May 31st, 2013 to human.resources@nynas.com