

Abstract

Processing the Opportunity Crudes is currently practicing, or at least, having an intent to process by most refinery operators for the reason of cost competitiveness. The cost of those opportunity crudes are considerable lower than the conventional crudes which could improve the GRM up to 20 cent/barrel. This margin is very meaningful to the refineries. Nevertheless, the drawback of the opportunity crudes involving in corrosion of equipment and piping cannot be overlooked. Some plants have been suffered from cost of these degradations after short period of benefit enjoyment.

To optimize between refinery margin and plant integrity, corrosion assessment is strongly required to answer the question that whether the plant is fit for processing the evaluating crudes. In addition, the earlier we can answer, the faster commercial crude ordering could be expedited which means more opportunity gain. In the old days, iteration assessment of crudes corrosivity and plant condition before purchasing those crudes was a practice while in certain situation, when opportunity crude is flashed to the market, only screening on the selected locations can be assessed. This pain point brought us to Crude Corrosion Assessment Software, C-CAS.

C-CAS is an assessment tool for High Temperature Sulfidic and Naphthenic Acid Corrosion assessment. Most of the corrosion factors integrating with the most updated plant equipment and piping thickness data are evaluated. The result is showed graphically addressing the most vulnerable areas of the system and their remaining life. This feature would allow the assessor to ensure integrity of the plant till the desired period. Balancing between the crude cost reducing and increasing of maintenance cost is also possible. On the other hands, ones can optimize crude blending recipe to fit with their acceptable hardware's life. This allows the users to predetermine whether processing those evaluating opportunity crudes would suit their plant total cost of ownership.