

## Industrial Heat Exchanger Descaling by DCI

- Client : Manufacturer of cable ties for aerospace industries, Singapore
- Test Date : Dec-19
- Objective of DCI : To remove the existing scale and rust and to prevent future occurrence.
- Application : Hydraulic Oil Cooling
- Process : Heat exchangers cool the hydraulic oil. The hot oil enters the shell side of heat exchangers and is cooled by the water at the tube side. The heat gained is subsequently dissipated by the cooling tower.



*A typical 2-Pass Heat Exchanger*



*Fig 1: DCI test set-up*

- Test performed : The water was circulated through DCI. On the 5<sup>th</sup> day, the water was changed as too much rust and scale had been removed and collected as shown in Fig 1.

On the 9<sup>th</sup> day after DCI treatment, a picture of tube side was taken as presented in Fig 2b.



*Fig 2a: Before DCI Treatment-tube side*



*Fig 2b: 9 days after DCI Treatment-tube side*

The shell side of heat exchanger was also treated. A picture, Fig 3b was taken after three weeks of treatment by DCI.



*Fig 3a: Before DCI Treatment-shell side*



*Fig 3b: 21 days after DCI Treatment-shell side*

- Conclusion : DCI proves effective not only in removing scale and rust, but also preventing build-up. The heat exchanger is thus protected and maintained in good condition.