

CASE STUDY

PROJECT WASTEWATER TREATMENT FOR IRON ORE MINE SITE

PRODUCT Oil Water Separator

INDUSTRY Mining

LOCATION Pilbara, Western Australia



BACKGROUND

The Roy Hill project needed a robust wastewater treatment solution that could separate free-floating hydrocarbons in the wastewater stream from their workshop and heavy vehicle wash down water. The mine site is remote and requires highly reliable and efficient equipment which allows the operation to maintain high availability and meet the mine sites strict environmental targets.

The oil water separator package was one of five packages for this project that MAK Water was engaged to complete as a result of its experience in delivering water treatment plants to the mining industry. The scope was to design and construct two Oil Water Separators (OWS) to treat wastewater from the mine site's fixed plant workshop and crushing stations prior to discharge to tailing ponds.

The plant was constructed to customer specific engineering and design specifications, using the project preferred electrical equipment, and supplied with a site specific vendor drawing and data package. MAK Water provided commissioning of the plant.

SOLUTION

Two packaged Oil Water Separators were delivered, each to treat 10 m³ per hour of wastewater.

DESIGN FEATURES

- Self banded waste oil storage tank to minimise the risk of spillage
- 316 stainless steel tank to prolong the life span of the plant
- Project preferred electrical equipment in line with customer specifications

MODULAR DESIGN

- Easily transported to site
- Minimal installation required
- 100% designed, constructed and tested off-site

RESULTS AND BENEFITS

- **Compliant wastewater.** Water treated to comply with site specific discharge requirements
- **Fully automated, reliable plant.** Low level of operator intervention reduces client's operating costs
- **Project compliance.** MAK Water met the project specifications and vendor data requirements



Oil Water Separator in MAK Water's workshop



3D drawing of the MAK Water Oil Water Separator installed on-site