Case Study

NEARSHORE GAS PIPELINE MONITORING FOR GRESIK REGENCY, INDONESIA

Figure 1 – Preparing for an SAAV Installation

BACKGROUND

PT Petrokimia Gresik, a government owned company of nearly 50 years provides fertiliser products and non-fertiliser chemicals such as medical oxygen, ammonia and gypsum for several industries in Indonesia and South-East Asia.

After a previously successful installation of ShapeArrays for HMA and a satisfied customer, Phase II of the Reclamation project for PT Petrokimia Gresik was commenced.

As part of the Reclamation Phase II project, construction activities were to be conducted close to existing gas pipelines. Recognising the requirement for safety monitoring, HMA Geotechnical were engaged to supply a robust instrumentation and monitoring solution to this project.

As soil movement and differential settlement were of concern, Measurand's ShapeArray (SAAV) was selected to provide quality and reliability to the instrumentation schedule.

Vista Data Vision (VDV) was selected to provide a reliable off-site data presentation software package, assisting with decision making and future planning.

OBJECTIVE

- Supply proven quality instrumentation for monitoring gas pipeline and soil movement (6x SAAVs)
- Design and supply a datalogging system to suit the instrumentation
- Provide a data presentation software package to assist with data analysis and decision making
- Allow for an early-warning alert system to act on data from the chosen instrumentation

CHALLENGES

- Safety for the existing site – gas pipelines present
- Ongoing construction works within the area
- Water present in the surrounding environment, corrosion to be considered
- Indication of movement required as soon as possible to assist with alarming

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SOLUTION AND OUTCOME

HMA was commissioned to supply a custom datalogging solution based on the customer's specific requirements. A corrosion-resistant 316 stainless steel enclosure was supplied housing all critical datalogger components. Pre-programmed and ready to integrate with Vista Data Vision (VDV), the datalogger was quickly and easily commissioned on site – leading to reliable data for the customer. Designed to read six (6) Measurand ShapeArray SAAVs, the datalogger was powered by solar and allowed for changes to be made remotely if required. The system is readily supported by trained HMA engineers based in Jakarta, Indonesia and Australia.

PT HMA GROUP INDONESIA STATEMENT

PT HMA Group based in Jakarta, Indonesia represent a number of high-quality brands and products across all PT HMA Group divisions – Instrumentation, Power Generation, Materials Handling, Wear Solutions, Flow & Industrial, and Geotechnical.

Our office is staffed by highly trained engineers who can provide customised solutions across all industries, with over 50 years of combined experience in various industries in the engineering field.

PT HMA Group is available to supply, consult on, project manage and install a large number of products across Indonesia and South-East Asia.

HMA GEOTECHNICAL STATEMENT

HMA Geotechnical have supplied bespoke monitoring systems and instrumentation to over 100 mines across Australia and the world, combining over 120 years of accumulated experience and has operated for over 35 years to deliver the right solution for our customers.

As an Australian employee-owned company, we take pride in our work.

Given our experience, workshop facilities and product range, we can supply the following options:

- Custom enclosures and frames to suit any application or condition made in Australia where possible to decrease lead-times.
- Integration with multiple software packages/protocols to suit any on-site requirement. Output can be via a range of industrial protocols (Modbus, DNP3, SFTP, others).
- Flexibility to supply and install globally.

Figure 2 – Datalogger Commissioning

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