PROJECT SPOTLIGHT

Aramco - Mobile Carbon Capture Research

MUSTANG ADVANCED ENGINEERING
Fearless Innovation™

Mustang Advanced Engineering (MAE), an American manufacturer of quality, industry-leading, testing equipment, dynamometers and related products, recently completed the installation of a heavy-duty chassis dynamometer at Aramco research and development center in Novi, Michigan. Aramco is one of the world's largest integrated energy and chemicals companies, creating value across the hydrocarbon chain and delivering societal and economic benefits. Aramco's R&D efforts hope to accelerate the reduction of emissions and improve fuel efficiency in the transportation industry, while building partnerships with leading automakers worldwide. Since 2010, Aramco has been researching mobile carbon capture as one such way of decreasing carbon emissions from internal combustion engine vehicles.

Aramco engaged MAE in the development of a chassis dynamometer that could accurately simulate the driving conditions for heavy duty, class 8 trucks and buses with precise load control and repeatability. MAE delivered a custom designed MAE-7500-3K400-FAN-BG dynamometer, which was installed below ground. The dynamometer features (3) air-cooled eddy current power absorber units (PAU's) along with an inertia disc and (3) individual fans for those PAU's. MAE's MAE-7500 series offers several levels of testing capabilities in a modular, compact package and with capabilities that can be upgraded.

SNAPSHOT

Project:	MAE-7500-3K400-FAN-BG dynamometer
Customer:	Aramco Services Company
Where:	Novi, Michigan
Purpose:	Research and development of mobile carbon capture to improve fuel efficiency and reduce carbon emissions of internal combustion engines, especially in the transportation industry

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MAE-7500-3K400-FAN-BG dynamometer

Aramco's mobile carbon capture research has seen on a smaller scale with pickup trucks and sedans a reduction of 25% of the CO_2 compared to standard capture rates. The process involves a medium which naturally binds to the CO_2 then is stripped, compressed and stored onboard the vehicle until it is offloaded. The potential for the CO_2 solids to be re-used could be viewed as a possible raw material with value in other industries and processes, such as carbon cured concrete. For more information, visit Aramco's website. For more information about Mustang's dynamometer system, visit MustangAE.com.

About the dynamometer system:

- Low maintenance, below ground making it safe & easy to operate
- Precise load control with accurate road load simulation and repeatability
- (3) Air-cooled eddy current PAU's with individual industrial cooling fans and (1) inertia disc

"This particular project concerning the research and development of mobile carbon capture to improve fuel efficiency, shows our expertise in developing dynamometers to exceed our clients' needs."

- David Ganzhorn, V.P. Sales

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About MAE

Mustang Advanced Engineering is a leading supplier of advanced, custom engineered testing and measurement systems. Located in Twinsburg, Ohio since 1986, MAE delivers world-class testing solutions, custom design support, technical assistance, backed by a dedicated factory service team, making them a trusted source of expertise for the global industrial market. Visit MustangAE.com for more information. Follow them on Facebook, Twitter, LinkedIn, and Instagram.