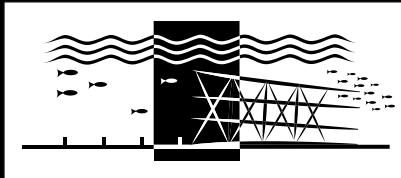


Health, Safety And The Environment:

# Use of Human Factors Engineering (HFE) in Design



Human Factors Engineering is a specialized discipline that focuses on human behavioral (i.e., social, physiological, psychological) and physical (i.e., size, strength, endurance) capabilities and limitations to produce designs and management systems which improve human systems interactions to improve safety. HFE is an enabler of Health Safety Security and Environment (HSSE) performance. In the early 1990s Shell became convinced that designs in the Gulf of Mexico could benefit from HFE reviews by individuals schooled in the technology. Many changes were made; most notably to labelling, stairways, ladders, access platforms and control room design.

HFE reviews have resulted in an estimated reduction in life cycle costs of 3 to 6% and a significant reduction in accidents. Taking HFE into account assures the design matches the capabilities of individuals using the equipment. This increases safety by making it more likely that individuals, while under stress, will take the appropriate action and be capable of responding quickly.

Recognizing the pioneering efforts of the following individuals and organizations that contributed to this technology:

Frank Amato, Mike Curole, Dan Godfrey, Denise McCafferty and Gerry Miller

G. E. Miller and Associates, Paragon Engineering Services (now AMEC Foster Wheeler) and Shell