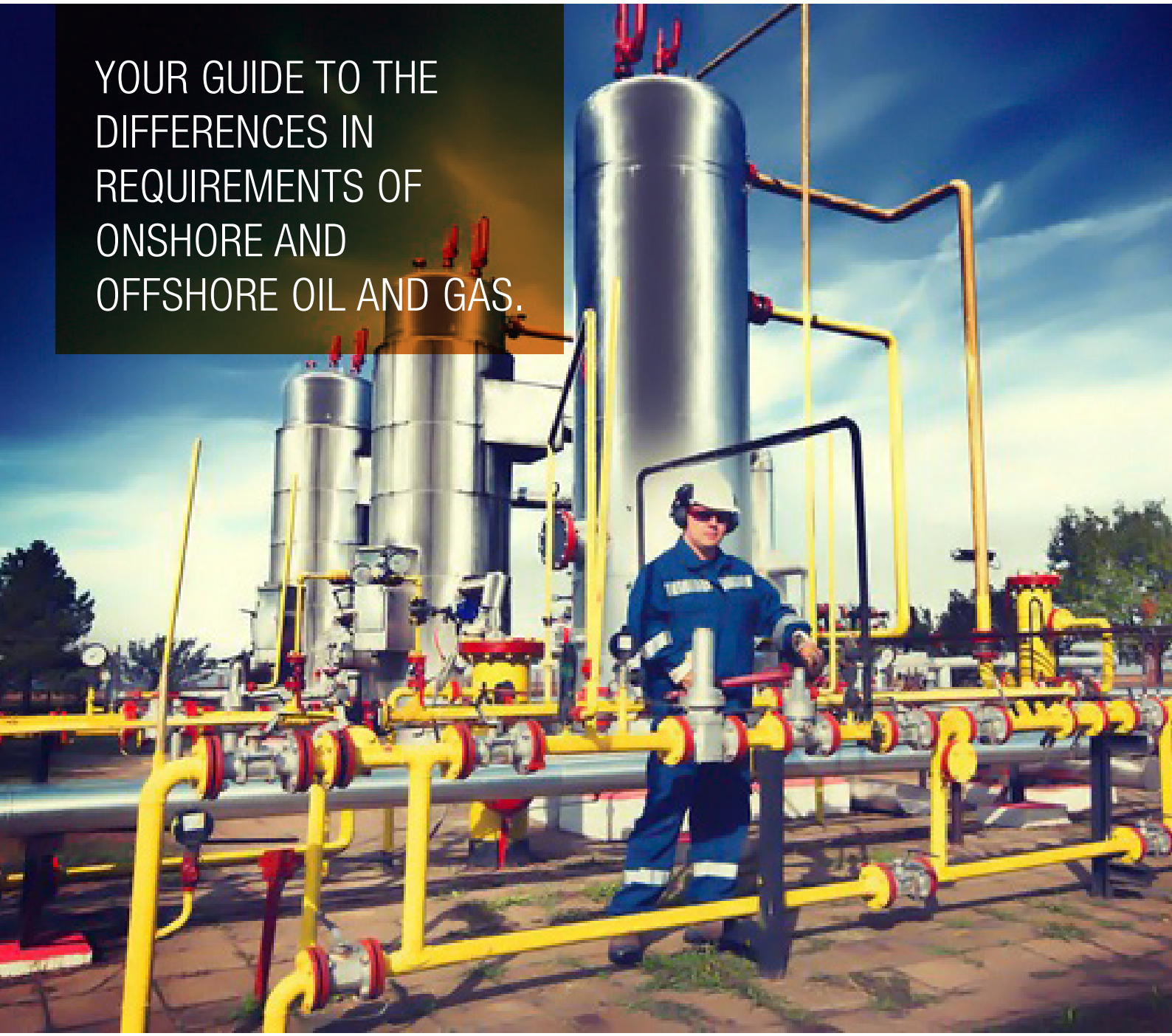
EXTEND TRAINING

WHAT YOU NEED TO KNOW: ONSHORE VS OFFSHORE

YOUR GUIDE TO THE DIFFERENCES IN REQUIREMENTS OF ONSHORE AND OFFSHORE OIL AND GAS.



EXTEND TRAINING EBOOK

1. LEGISLATION

The legislation covering the Australian offshore industry is a Commonwealth (federal) Act: The Offshore Petroleum and Greenhouse Gas Safety Act (OPGGSA). That means the law is the same whether you are in Bass Strait, the North West Shelf or anywhere else in Australian waters. The industry regulator is the National Offshore Petroleum Safety and Environmental Management Agency (NOPSEMA). State laws, including the electrical safety laws that mandate compliance with AS/NZS 3000, do not apply. However, an electrical licence is still required to do electrical work.

Onshore the regulation is state based, so it differs from state to state, and will also vary depending on the type of facility. Upstream facilities (production wells) will usually be covered by legislation relating to petroleum leases. Downstream facilities like refineries, terminals and LNG plants may be covered by Major Hazard Facility legislation (depending on the state), and pipelines by still other legislation. Electrical legislation may or may not apply, depending on the other laws that have jurisdiction. It's messy, and different in every state, but for many types of facilities the laws that mandate AS/NZS 3000 do apply. Electrical licensing requirements definitely apply to all types of facilities in all states.

It sounds frighteningly complicated, but in practice it boils down to:

- Offshore there is no law that mandates AS/NZS 3000, but it may be called up anyway (see the next section).
- Onshore it is likely (but not certain) that AS/NZS 3000 will be mandated by law.
- Electrical licensing requirements apply to both onshore and offshore.

2. STANDARDS

Onshore it is likely that AS/NZS 3000 will apply, often together with other industry-specific standards such as the AS/NZS 3007 series. Even if the legislation that applies allows some freedom for the facility owner to nominate different standards to control electrical risk, it is rare that that will do so. Australian electrical workers are familiar with AS/NZS 3000, so nominating some other standard is likely to create confusion and cause problems.

Offshore it's a whole different ball of wax. Firstly, the legislation allows freedom for facility owners to nominate any standards that they deem appropriate to control the risk. The operator is required to submit a "safety case" for the facility, which includes the standards to which it will be constructed, operated and maintained. Secondly, the facility may be "classed" which means that the standards nominated by the marine class society (Lloyds, DNV, ABS) will apply. The upshot of all this is that it is less likely for AS/NZS 3000 to apply to the installation. However, it is still quite likely that AS/NZS/IEC 60079.14 will apply to the hazardous area installation. This is either because the standards will be called up in the safety case, or because it is nominated by the class society.

> “STANDARDS DRIVE A LOT OF THE DIFFERENCES BETWEEN ONSHORE AND OFFSHORE INSTALLATIONS, BUT SOME THINGS ARE SIMPLY DOWN TO PREFERENCES, OR ESTABLISHED INDUSTRY PRACTICES.”

3. QUALIFICATIONS

If you want to get into the offshore game, you will almost certainly need to hold a dual electrical/instrumentation trade. Accommodation is limited on offshore facilities so electrical personnel are expected to also handle instrumentation. You'll need some maintenance experience in your CV too – not just construction.

EEHA competencies covering installation, maintenance and inspection will be a mandatory requirement (Extend Training's EEHA Install, Maintain and Inspect course covers these), and of course there is a whole bunch of other mandatory safety training for the offshore industry – BOSIET, FOET, HUET and so-on. Having those qualifications under your belt might give you a leg up over other applicants in a recruitment decision. Extend Training's partners ERGT are able to offer these courses at their centres throughout Australia.

> "ACCOMMODATION IS LIMITED ON OFFSHORE FACILITIES SO ELECTRICAL PERSONNEL ARE EXPECTED TO ALSO HANDLE INSTRUMENTATION."

4. INSTALLATION PRACTICES

Standards drive a lot of the differences between onshore and offshore installations, but some things are simply down to preferences, or established industry practices. Some of the biggest noticeable differences with offshore installations are:

- Cables – braided armour is more common, low-smoke, zero-halogen (LSZH) cables mandatory
- Cable transits – Multi Cable Transits (MCTs) will be used for all penetrations through walls, rather than the block and cement work often used onshore

Familiarity with terminating braided armour cables and working with MCTs would be a big advantage for anyone trying to get into the offshore industry.

> “FAMILIARITY WITH TERMINATING BRAIDED ARMOUR CABLES AND WORKING WITH MCTS WOULD BE A BIG ADVANTAGE FOR ANYONE TRYING TO GET INTO THE OFFSHORE INDUSTRY.”

5. INSPECTIONS & MAINTENANCE

Offshore facilities are in exposed to a harsh environment, and they're a long way from help if something goes wrong, so inspections and maintenance are taken very seriously. A continuous supervision system is sometimes employed to get the operators helping out with monitoring the condition of the facility, but the inspection load will still be significant. Getting onto an EEHA inspection crew for an inspection campaign is one possible way of cracking the door to the offshore industry open.

“FAILURE TO TAKE PROPER CARE AND ATTENTION WHEN WORKING IN HAZARDOUS AREAS CAN HAVE CATASTROPHIC CONSEQUENCES.

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"An excellent training. My colleague and I were very impressed with the whole thing."

John, Clough AMEC

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