

Standards in Action

CASE STUDIES

STANDARDS
Australia



Standards Australia operates across every sector of the Australian economy to deliver the standards that increase safety, promote sustainability and drive efficiency.

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Growing the right way.

AGRICULTURE, FORESTRY, FISHING & FOOD

AS 2303:2018, *Tree stock for landscape use*

The development pressures on open space in our cities, both public and private, are becoming extreme. High quality open space can be an expensive venture, with money easily spent in beautifying even the smallest of spaces. To get the basic building block right in the first place, and in an effort to improve the quality of trees used in the built environment, Standards Australia has worked to develop AS 2303:2018, *Tree stock for landscape use*, which seeks to outline the best practice requirements for trees being used for landscape purposes.

Fault free trees

This standard aims to simplify the specification selection of tree stock, and to describe the preferred above and below ground characteristics in determining quality tree stock for landscape use. In doing so, highlighting critical factors impacting the quality of a tree. Importantly, the presence of any faults at the time of planting can significantly impact the life span of the tree and the resources required to

establish the tree if used for landscaping purposes.

Such a priority is placed on getting the tree stock right in the initial stages of landscaping that this standard covers only the stock quality aspect of the entire landscaping process. Put simply,

selecting the tree based on quality is the vital first step of a successful overall landscaping process.

As is the case with all Australian Standards, before they are developed there must be a clear case of net benefit to the Australian community. There are a number of criteria to be met, however, when examining this standard it is the substantial economic and environmental benefits which have led to its development.

Economic benefits

As this standard seeks to aid in managing the quality of tree stock for landscape use, the possible faults in some trees are intended to be caught earlier, at dispatch. This early intervention in the process translates to less problems with the tree in its establishment and nurturing it as part of the overall built landscaping. Therefore,

the economic benefit of this standard is proved with the resulting lower utility bills and less maintenance costs as a result of early intervention.

Environmental benefits

The environmental benefits emanating from this standard come in a very similar form to that of the economic benefits, in that if the tree being utilised in a landscape venture is established properly and without fault there is likely to be less wastage. Ultimately,

growing the best tree in the correct manner the first time is ideal and is exactly what this standard aims to facilitate.

While this standard seeks to provide suppliers and purchasers of tree stock with a method to identify quality trees for landscaping, this is just the first part of the process and should be combined with a well-designed landscape, good selection of species, correct planting technique and ongoing maintenance. Despite its involvement only in the early stages of landscaping, this standard proves its benefit to the community in its guidance for consumers on how to go about selecting the best tree stock for planting in the built landscape.



Guiding the construction of Australian infrastructure.

BUILDING & CONSTRUCTION

AS/NZS 5100:2017, *Bridge Design*

From kilometres of roadways connecting hectares of farmland; to thousands of trains and buses connecting millions to their workplaces, Australia is a country of moving parts. Industries rely on freight roads to be able to move products, and the general public relies on railways and major roads to connect the suburbs to the cities. Joining the dots of this societal puzzle are the bridges of Australia.

While not everyone crosses the Sydney Harbour Bridge as part of their daily routine, most Australians will appreciate the impact of this type of vital connection and its economic and social contribution. However, not to be forgotten are the many road and railway bridges connecting some of the most remote towns across Australia.

Bridges big and small

Whether travelling across the Bowen Bridge in Tasmania to get to work, or crossing the Diamantina River outside Birdsville in Queensland there are any number of different types of bridges constructed with different materials and in very different shapes and sizes.

Despite their differences the one common theme across the bridge sector is the Bridge Code 2017. As the Australian standard, the Code seeks to provide the best practices to be used in bridge design, maintenance and construction.

AS(NZS) 5100:2017 series, *Bridge design*, or the Bridge Code 2017, sets out requirements for the design, assessment and alteration of new and existing bridge structures.

Details in design

This standard provides guidance on the design of new road, rail, light rail, pedestrian and cyclist path bridges, as well as the assessment of the load capacity of existing bridges and methods to strengthen and rehabilitate them. The standard also covers other structures, such as road sign and lighting structures, noise barriers and protection screens.

This 9 part Australian Bridge Code reflects a number of changes since its 2004 edition; it was revised in response to changes in the Australian climate and bridge design. New bridge design loads for light rail, fire, ship impact and loads from natural disasters including urban flooding form

part of this standard which seeks to adjust to the needs of bridge designers. Importantly,


as well as responding to changes in the Australian climate and industry needs, the Bridge Code has placed Australia at the forefront of modern bridge design.

Supporting Australians everywhere

Bridges are everywhere. Connecting Australia's biggest metropolitan cities with its smaller outer suburbs; enabling farmers to get livestock or produce to the ports for international markets;

even the tourism sector relies on effective and efficient bridges with the Mossman Gorge in far North Queensland and Sydney's Darling Harbour being difficult to cross by foot without the use of a bridge.

The Bridge Code is not just a guideline for bridge designers to check off while constructing this vital infrastructure. Across the country, bridges have vast economic, social influence and benefits for the entire Australian community. The small list above of the variety of bridges serving a range of purposes is a reminder of how fundamental bridges are to Australian life. Bridge design experts, having rigorously developed these series of standards that seek to provide safety and durability requirements for bridge developers, extending to show it is the Australian community as a whole that benefits most.



Instructions for those with the data.

COMMUNICATIONS, INFORMATION TECHNOLOGY & E-COMMERCE SERVICES

AS ISO/IEC 38505.1:2018,
Information technology – Governance of IT – Governance of data, Part 1: Application of AS ISO/IEC 38500 to the governance of data.

We are entrusting more and more of our lives to the digital companies managing our most sensitive data. With so much of our information available online, and with companies contracting their data management out to other companies, any guidance to those managing this information can surely be a good thing. For this ever-expanding void we have AS ISO/IEC 38505.1:2018, *Information technology – Governance of IT – Governance of data, Part 1: Application of AS ISO/IEC 38500 to the governance of data.*

While the title can be confusing, if not a little intimidating given its length, in essence we are talking about a series of guiding principles for the directors, CEO and senior managers of any organisation to follow and give their stakeholders the trust they are going to manage their most precious data in a responsible manner.

More than just buzz words

In the age of cloud computing we are also seeing the realization of the internet of things and an increasing use

of big data. For professionals in the ICT sector this will be a statement many will agree with, but for the average Australia that uses computers only when we need to these will be industry buzz words.

However, it is because of the increasing cloud computing and more data being collected that we have this standard in place.

As organisations use our data in new and exciting ways the standard provides guidelines so that we can have faith it is being managed responsibly.

Specifically, this standard is intended for owners, directors, partners, managers, or similar to be provided with guiding principles on acceptable use of data in their organisation by:

- Applying governance principles and model of AS ISO/IEC 38505 to the governance of data
- Assuring stakeholders that if the principles and guidelines of the standard are followed they can have confidence in the organisation's management of data

- Informing and guiding organisations on use and protection of data
- Establishing a vocabulary for the governance of data

Data is easier than ever before to harvest and to use by not only the company that collects it, but by anyone prepared to pay for it.

As such, there is a clear urgent requirement for organisations to ensure sensitive data is protected and secured.

Not all bad news

To avoid the doom and gloom, this is not all bad news. What are the benefits of big data?

The benefits are a more tailored experience, and the ease of not needing to transfer vital information from organisation to organisation. These are quickly undone if the wrong person accesses someone's data, or someone uses it for the wrong reasons. This is exactly where AS ISO/IEC 38505 plays a key role in enabling, and expecting, those with access do the right thing with our data.

This standard is one where the impact will be felt by the entire Australian community, but we may likely not see it in operation. The work of this standard starts at the board table and flows to the inner workings of each organisation it impacts, but the benefit is in each and every transaction we have with key data.



Toy safety in modern Australia.

CONSUMER PRODUCT, SERVICES AND SAFETY

AS/NZS 8124.6:2016, *Safety of toys - Part 6: Swings, slides and similar activity toys for indoor and outdoor family domestic use*

As we progress further into the 21st century and the entertainment of children takes place even more so on an iPad or another electronic device, there was a time when activity toys were the primary source of enjoyment for children. Toys such as slides, swings, seesaws, or rocking toys as well as paddling pools on the hotter days were there for amusement around the family home. In a similar recollection to the enjoyment of running and playing on these toys, often there is a tragic accident which comes to mind.

Playful past-times

Falling from a slide, getting hair stuck in a swing, or being on the losing end of a seesaw were all incidents many of us would like to forget, however they did happen. It is for this

reason that the introduction of AS/NZS 8124.6:2016, *Safety of toys - Part 6: Swings, slides and similar activity toys for indoor and outdoor family domestic use*, has taken place and aims to put safety back in play.

The standard, AS/NZS 8124.6:2016, has been developed to outline requirements aimed at minimising the risk from some of the specific hazards associated with certain types of products when used in a domestic environment. The types of products covered by this standard include swings, slides, carousels, rocking toys, climbing frames and toddler swing seats bearing the mass one or more children. This standard also has a specific intention which is to cover those toys for domestic family use and for children under 14 years of age.

Ultimately, this standard gives suppliers the guidance to create toys and objects like slides and swings which bring enjoyment to the users but are also safe.

Basics for our benefit

Proving the benefit of this standard, in its commitment to child safety, is the example of the requirement for safety labelling to be in a visible, easily legible, understandable and indelible form. To put it in even more straightforward terms, in the case of AS/NZS 8124.6:2016 the benefit is a simple one - improving child safety.

Regardless of any shift towards electronic toys or video games, playing outside is still what children do; and while this continues, suppliers are going to keep finding new and innovative ways to provide the toys to keep children entertained when they play outside. It is in this space that Standards Australia seeks to provide comfort to the parents of today's children by equipping manufacturers with the guidance to create the safe slides, swings, and seesaws to be enjoyed for many years to come.



Instilling the basics of boarding.

EDUCATION & TRAINING SERVICES

AS 5725:2015, *Boarding Standard for Australian schools and residences.*

Some are steeped with history of prestigious alumni, while others are seen as simply the means to an educational end; but whatever the individual experience, boarding schools have been around for centuries and are becoming increasingly popular. Despite the state by state boundaries of the education system, and regardless of any educational standard being pursued by the school itself, Australian boarding facilities can be guided by AS 5725:2015, *Boarding standard for Australian schools and residences* in managing their operations.

A national approach

From a legal perspective, the difference in education systems across state and territory borders is mirrored in the legislative requirements affecting boarding services in Australia. In an effort to address this, AS 5725:2015 seeks to provide a common framework across all jurisdictions and is intended to be of benefit to both service providers and users.

In doing so, this standard outlines requirements for the management and operation of residential boarding services for students attending school, including those governed by the school or independently.

There are a number of specific examples as to how this standard seeks to improve the safety of boarders, including the following requirements:

- A trained person be accessible at all times who can administer and manage CPR, allergic reactions, diabetes, epilepsy, and the distribution of medication.
- Regular review of the record of critical incidents and injuries undertaken by a designated officer.
- Working with children clearances for all personnel.
- A program promoting social responsibility.

In developing a minimum requirement across Australia,

parents in every state and territory can be assured there is a guidance available for providers of

boarding facilities on how to best manage the welfare of children.

Again, its availability across each state and territory means this standard can give peace of mind to parents of boarders right across Australia that there is guidance for those supervising their children.

27,000 reasons to get it right

While the coverage of this standard is limited to those directly involved with boarding, this is no small group of people.

In 2016, there were over 27,000 boarders piling into 200 boarding schools across the country and the numbers are continually increasing.

Prior to their development, every standard must demonstrate how it is going to provide a net benefit and while AS 5725:2015 is targeted to those directly involved with boarding facilities, the clear benefit of this standard is the

guidance it provides for the safe management of children as they head off to boarding school.

As mentioned, the coverage of this standard is limited to those directly involved with boarding, however even in this specific circle it extends to those working in a boarding facility, boarders themselves, and anyone interacting with a boarder. Such a broad, and nationally relevant, standard may not impact every single Australian but will certainly have a major impact on the educational sector in each state and territory.



Getting electricians right at installation.

ELECTROTECHNOLOGY & ENERGY

AS/NZS 3000:2018, *Electrical installations*

The technical nature of standards around the world often leads to them working for the professionals in our community more directly than the everyday individual.

A perfect example of standards being professionally driven but interacting with nearly the entire Australian population is the Wiring Rules.

Spanning nearly 600 pages, the Wiring Rules consists of two separate parts. Part One outlines fundamental safety principles that constitute minimum regulatory requirements for safe electrical installation with Part Two detailing solutions to satisfy fundamental safety principles for the electrical installation work.

It is within these hundreds of pages that the complex requirements for the design, construction and verification of electrical installations are outlined. Of which is the selection and installation of electrical equipment forming part of these electrical installations.

Safety from start to finish

Ultimately, the standard seeks to protect persons, livestock, and property from electric shock, fire and physical injury hazards which may arise from an electrical installation used with reasonable care and with appropriate regard to its intended purpose. Also,

not only does the standard seek to provide guidance on safe use of the installation but also to provide guidance so the installation functions correctly for the purpose intended.

600 pages, while not too uncommon in the standards world, is a long document when it comes to safety and guidance on effective installation of electrical equipment. However, with over 165,000 Australians employed in the sector it is important standards play their role and provide the best advice as possible on how to operate safely when it comes to electrical wiring.

Not just for the technically minded


Standards such as the Wiring Rules seek to provide technical and specialised advice to those in a particular profession and, in this case, industry. However, as mentioned above,

the Wiring Rules serve as an example of standards going beyond their technical bounds to help even the most amateur of electricians.

Whether around their own home, or at the behest of a relative or neighbour, most Australians will at some point have changed a light or taken on exceptionally basic electrical maintenance around the house. It is at this point the Wiring Rules will have played their role.

While changing a lightbulb may not be the challenging situation the Wiring Rules were developed for, it is this standard that will have shaped how the lights were wired to the house and how they now interact.

Improving safety in high-risk professions is an obvious and achievable aim of many standards, and the Wiring Rules and recent amendments serve as an example of how this can be done not only to the benefit of the industry but to the entire community.



Finger on the pulse of digital hospitals.

HEALTH & COMMUNITY SERVICES

SA HB 163:2017, *Digital Hospitals Handbook*

Standards Australia takes pride in the innovation being delivered by the entire organisation in some of the most sophisticated areas of modern Australia. None more so than in the field of healthcare, as Standards Australia has taken the lead internationally and developed SA HB 163:2017, *Digital Hospitals Handbook*, in a world-first aimed at guiding hospitals towards their digital future.

This handbook seeks to develop a set of principles and recommendations to inform the design and implementation of digital hospitals,

both new and refurbished, to enable the innovative provision of healthcare services.

A realistic digital hospital

The objective of this handbook is to provide guidance on what a digital hospital is and propose a realistic set of principles that provide the basis for the development of a Digital Hospital Program. Additionally, almost half of this handbook outlines a business case from design, to implementation, to go-live, and right through to the final handover.

With 10.6 million admissions to hospitals across Australia in 2015-16, and roughly 40% of these taking place in private hospitals, the sector nationwide is under pressure to find ways to innovate and improve processes.

21st century hospitals

The details and guidance provided in the handbook targets those in the healthcare sector to help them bring their hospital into the 21st century and position their organisation for the future. It is important to note the significance of the changes being proposed and the deep impact to everyone interacting with hospitals across Australia.

As outlined above, the hospitals of Australia are incredibly well-utilised and show no sign of slowing down.

The ability of the health sector to continue to work for Australia lies significantly within the technology sector.

For example, maintaining records on an electronic database and being able to manage patient records across the nation in an electronic and comprehensive manner is one of the more straightforward

technological enhancements which can be made. In achieving something like this, the benefit of a digital hospital is quite clear.

The work of the handbook, whilst technical in its language and intended use, is one of the leading documents at an international level aimed at digitising hospitals. The benefits of this handbook are intended to be in the form of improved health services, streamlined processes for hospitals, and untold enhancements as technology continues to improve and radically shape hospitals of the future.



Manufacturing a safe outcome

MANUFACTURING & PROCESSING

AS 4024 series, *Safety of Machinery*

From cheese making to metal smelting, medical equipment and petrol, Australian companies are manufacturing a range of products for Australian and international purposes daily and use plenty of machinery while doing it. Enter the AS 4024 series, *Safety of Machinery*, a range of standards aimed at increasing the safety of machines and those using them.

One for all, and all for safety

The manufacturing and processing industry currently employs around 900,000 people across Australia.¹

And the reach of this series of standards is greater still, including engineers, designers, safety officers and even those who simply work near machinery.

Made up of 26 standards, designed to give users of machines the tools to conduct detailed risk assessments so they can determine a safe, compliant design of fixed plant and machinery. The standards aim to outline safety and design guidelines that consider the many people impacted by the inner workings of machines.

One of the more dynamic parts of the series is AS/NZS 4024.1604:2019. This standard sets out to specify requirements and design principles for the emergency stop function on machinery.

Emergency stops are an important aspect of machinery that can quickly stop an incident occurring, protecting both workers and machines.

Other standards included in the AS 4024 series cover the detail of safety control systems, presence sensing systems, guarding and ergonomic considerations to help deal with the level of risk.

Leaving risk at the door

It's important that people in workplaces around the country can complete their job in a safe and accessible manner.

Accidents resulting in unsafe machinery reach far beyond those involved in the

incident; whole communities, workplaces and families can be heavily impacted. By providing clear guidelines, this standard aims to increase the safety of workers, protecting both them and the broader Australian community.

This series is a tool that can be used by the sector to help achieve compliant, safe machinery and to assist in determining compliance with legal requirements.

Technology of machines may grow but the need to consider the safety of those using them will continue to be a priority. Standards Australia will continue to produce standards, like the AS 4024 series, with the aim of protecting Australians.

¹ <https://www.industry.gov.au/data-and-publications/manufacturing-performance-report>



Keeping mining moving.

MINING

AS 4457.2-2008, Earth-moving machinery – Off-the-road wheels, rims and tyres – Maintenance and repair – Tyres

While most of its workforce likely started with Tonka trucks in the backyard as a young child, the earth-moving industry in the mining sector works with some of the heaviest and most highly engineered vehicles on a daily basis. It is quite clear then, to see any maintenance task on these vehicles as a risky activity and one in need of consistently safe procedures.

It is in this pursuit of safe maintenance that AS 4457.2-2008, *Earth-moving machinery – Off-the-road wheels, rims and tyres – Maintenance and repair – Tyres*, seeks to provide guidance to those in the industry.

This standard aims to provide those involved in the earth-moving industry with information on the repair, retreading and correct maintenance of tyres used on earth-moving machinery. The size and force evident in the everyday practices of this industry mean safety must be a high priority, and any information on how to best maintain vehicle tyres should place safety as the number one concern.

Tyre safety for broader benefit

Earth-moving tyres can be a cause of extremely hazardous situations which may result in fatalities if correct procedures for the repair, retreading and maintenance of tyres have not been followed. Further, even the use of repaired or retreaded tyres that are substandard and the use of poorly tyres maintained pose high risks to those operating the machinery.

As is always the case in safety, risks need to be identified, controlled, and eliminated or minimised.

The earth-moving sector is no exception to this and with the magnitude of some of the equipment, and the work being undertaken, the risks can be far more serious in this industry than many others.

While the mining sector has been a significant employer in years gone by, there has also been related industries growing

right alongside. The more prominent industries include things like mining technology, logistics, and construction – all three of which will be similarly influenced by the intention of this standard.

All the industries running alongside mining, as well as obviously the mining sector itself, will require earth-moving machinery at some stage and eventually maintenance will need to take place. It is here that AS 4457.2-2008, aims to facilitate safety for those involved.

Constant improvement

Standards are living documents, and even when published they are never truly completed. This particular standard is an example of one operating in an industry that is deeply committed to safety and looks to standards for support. It is in this mould that we see this standard regularly discussed for updating, and one that garners so much support from industry to be as up to date as possible.

Like many other standards, beyond the professionals

directly impacted by its intention it can be difficult to ascertain exactly how far the benefit of this standard will reach. Put simply,

this standard aims to protect those involved in maintaining the heaviest of heavy vehicles

and in turn keeping those operating earth-moving machinery safe while on the job. So while it is unlikely to impact every single Australian, for those people that do interact with this standard it may well just save a life.



A systems approach to safety.

PUBLIC SAFETY, PUBLIC ADMINISTRATION, BUSINESS & MANAGEMENT

AS/NZS ISO 45001:2018,
Occupational health and safety management systems – Requirements with guidance for use

Reflecting on times when we have taken precautions in our own lives, we often conjure up strapping a helmet on pre-bike ride or putting proper shoes on for a bushwalk. Standards have long been increasing safety in the background, but the publicity of AS/NZS ISO 45001:2018, *Occupational health and safety management systems – Requirements with guidance for use* has thrust this more methodical approach to safety into the public eye.

This standard is likely not to be used by the everyday Australian,

Rather the publication is aimed at the safety managers in a workplace

in responding to safety risks regardless of industry or size of the organisation.

According to [Safe Work Australia](#), 3,414 workers have died from 2003 to 2016. Startling statistics by any measure, however it is the scope of tasks and representation in these statistics by each industry and sector that is more concerning. The fact that every sector has a number of serious injuries, if not fatalities, proves how standards such as ISO 45001 play a crucial role in every organisation.

At a high level, this standard outlines the requirements for an organisational management system to manage occupational health and safety.

Of most importance, this standard outlines the significance of having everyone within an organisation to be involved in effectively managing risk of harm, injury or death associated with work.

But what does it really do?

It has been developed to be applicable to any organisation regardless of its size, type or its activities. It is applicable to the occupational health and safety risks under the organisation's control, taking into account factors such as the context in which the organisation operates and the needs and expectations of its workers and other interested parties.

Safe design wherever they go.

TRANSPORT & LOGISTICS

AS 4191:2015, *Portable traffic signal systems.*



Overlooking the inconvenience of being stuck at a red light, most people will be familiar with the three colour traffic lights and the role they play in safety at thousands of intersections on a global scale. While these traffic lights are important and are heavily utilised, their portable version plays an equally critical role.

The design, construction and performance of portable three-colour traffic signal systems are guided by the Australian Standard, AS 4191:2015, *Portable traffic signal systems.* In providing this guidance,

The standard not only controls the flow of traffic in instances of roadworks or bridge works but contributes significantly to the

safety of those working in these situations.

However, it is important to note that while this standard facilitates the design, construction and performance of this type of portable traffic light system, it is the regulation of the relevant traffic authority which will often outline its use. Also, this standard is one of a number which sets out requirements for the equipment associated with traffic signalling.

A versatile contributor to safety

Traffic lights guided by this standard are those used in roadworks or bridgeworks; and those used by small roadwork crews in locations with poor visibility, or where stop-go sign operators may not be appropriate.

These simple systems are therefore deployed to promote safety when it is the safety of a particular road being improved.

It is the design and performance of these traffic lights guided by this standard that are among the main contributors to the wellbeing of the construction workers involved in these safety improvement projects. Thus, as is the case with every Australian Standard and its requirement to deliver net benefit to the Australian community, AS 4191:2015 delivers a positive benefit to those using it in a professional sense but also extends to every Australian road-user.

Whilst the safety objectives of this standard are quite clear in their impact on

road construction workers, the common design of this traffic light ensures everyone using the road and interacting with these lights are comfortable in doing so based on the reliability and safety intended by this standard.



Labelling standards making it clear for consumers.

WATER & WASTE SERVICES

AS/NZS 6400:2016, Water efficient products – Rating and labelling.

Some standards are clearer than others when it comes to their benefit to the community, with some taking a little bit of digging to understand the true depth of their impact. But, in some cases the name of the standard makes it obvious who benefits and what the advantages are, and AS/NZS 6400:2016, *Water efficient products – Rating and labelling*, is no exception.

At a time when household budgets are stretched to their limits and consumers have a plethora of information available to them when making buying decisions, the products used daily for basic cleanliness are now more accountable for the water they use. That is,

consumers can now make their buying decisions based on the water efficiency of shower heads, toilet systems, or kitchen and bathroom taps.

Backing the law

Working with the Water Efficiency Labelling and Standards Act 2005 (Cth)

(the WELS Act), this standard seeks to provide the guidance manufacturers and suppliers need whilst creating a level playing field in rating and labelling water efficient products. It is this standard which aims to provide the guidance for suppliers on how to rate and label their products correctly in terms of water use.

More specifically, this standard can be applied to showers, tap equipment, flow controllers, lavatory equipment, urinal equipment, dishwashers, clothes washing machines, and the dryer of combination washer/dryers where water is used to dry a load.

The technical requirements for manufacturers and suppliers to comply with in this standard are quickly brought back to reality for the average Australian with the iconic star rating system.

When shopping for a new washing machine, dishwasher or a tap for the bathroom renovation many consumers will be well aware that the more stars a product has the

more efficient it has been rated.

Benefits beyond the stars

But this standard not only aims to give consumers the ability to make a more informed decision, the broader Australian community benefits with this standard also playing a role in reducing inefficient products on the market.

According to the Department of Agriculture and Water Resources,

by 2021 it is estimated the use of water efficient products will help reduce domestic water use by nearly 150,000 megalitres each year – enough water to fill 60,000 Olympic swimming pools.

With so much to be saved, the guidance to manufacturers is a clear positive flowing onto the broader community.

Consumers continue to reap the benefits when we look at how environmental considerations are becoming a growing factor in buying

decisions, particularly when it comes to utilities and energy consuming products. With this type of movement in the marketplace, this standard is uniquely placed as it guides consumers in making a more informed decision about a product that is efficient, allowing for less impact on the environment and a smaller utility bill.

AS/NZS 6400 is an excellent example of standards being the intersection of positive economic and social impact, and given the revision which took place to deliver this latest edition consumers can expect an innovative future as market and societal requirements continue to develop around energy efficiency.

Pipelines of productivity.

OIL AND GAS

AS(/NZS) 2885, *Pipelines – Gas and liquid petroleum series*



Every industry has their own key ingredient to ensure future success. The IT sector has the human thirst for the next best thing, construction has the sheer amount of land available in Australia, energy has the enduring need to be more efficient, so what does the oil and gas industry have? The essential infrastructure we all need.

In keeping the oil flowing and the gas pumping are the kilometres of pipelines stretching across countries all over the world. As these pipes snake across landscapes to

ensure oil and gas gets to wherever they're needed, here in Australia there is an extra piece of guidance to support their rollout.

This guidance takes the form of the 2885 series of standards which guides the safe design, construction, inspection, testing, operation and maintenance of onshore and submarine pipeline systems.

Why is this important?

The standards in this series are fundamental in

protecting the public and professionals in the pipeline sector, as well as improving security of supply and protection of the environment.

There is a constant push for more efficiency, less damage, more comfort, and less of a footprint in all things energy related particularly in the more traditional areas of energy use in Australia. While these are all worthwhile endeavours the oil and gas sector in Australia remains a huge economic powerhouse in terms of GDP

and direct and indirect jobs.

Standards in this space play a unique role to all other influencers in the sector. The 2885 series considers the professionals and the public involved, while the oil and gas products can continue their job of fuelling our economy.

Where professionals need safety guidance; the public needs assurance; the environment needs consideration; and the economy needs fuel, standards are front and centre and the 2885 series is no exception.

The 2885 series of standards is divided into 7 sections:

AS 2885.0:2018	Part 0: General requirements.
AS/NZS 2885.1:2018	Part 1: Design and construction.
AS/NZS 2885.2:2016	Part 2: Welding.
AS 2885.3:2012	Part 3: Operation and maintenance.
AS/NZS 2885.4:2016	Part 4: Submarine pipeline systems.
AS/NZS 2885.5:2012	Part 5: Field pressure testing.
AS/NZS 2885.6:2018	Part 6: Pipeline safety management.



What we do

Standards Australia is the country's leading independent, non-governmental, not-for-profit standards organisation. We are also Australia's representatives of the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC).

standards.org.au