



NMSC Media Release

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The ABP and Plate Boats

Australian Builders Plates which are appearing on new boats in dealerships across the nation, give boaters key safety information about a boat's capacity and capability.

Australia has few mandatory controls on the design and construction of recreational boats compared to similar developed countries, like the USA, Canada and Europe. The Australian Builders Plate (ABP) Standard is the main legal requirement and was developed to address key safety risks identified when boating incidents were analysed; notably when people have drowned as a result of smaller boats having been capsized or swamped.

"While Australian boaters like to take the view that it will never happen to me; it's sobering to think that 40 people died in recreational boating incidents in Australia in 2007 alone," explained National Marine Safety Committee CEO Maurene Horder

"Most new recreational boats and new owner built boats will need to comply with the ABP, which has been introduced around the country through point of sale legislation and/or as an administrative requirement for first-time registration. "

The purpose of the ABP is to assist the skipper by providing information that he or she couldn't easily determine otherwise, including the maximum power outboard that can be safely be used, the maximum number of people that can be safely carried on board; as well as the total maximum load.

"The maximum load information is particularly helpful to skippers when planning their trip and helps them to avoid overloading and possible capsize."

Maximum load includes: the weight of people; outboard engines; and carry on equipment such as safety gear, eskies, fishing tackle, spare parts and portable tanks etc.

Another aspect that a skipper needs to know is 'if this boat capsizes, will it float?' That's why boats under 6 metres in length have to show their buoyancy performance on the ABP, expressed as either:

- Basic flotation which means that the boat will float in some capacity in the event of swamping or capsize. This may allow you to cling onto the boat whilst awaiting help; or.
- Level flotation which means that the boat will float in a level position if swamped. This will allow you to remain in the boat and possibly bail out the water whilst awaiting help.

"The simple fact is that a reasonable proportion of smaller boats built prior to the ABP coming into effect will most likely sink if they capsize, as the cricketers, Matthew Hayden and Andrew Symonds found out the hard way a few years back when their boat capsized and sank after hitting a wave off North Stradbroke Island."

The cricketers managed to swim more than a kilometre to shore, but most people aren't as fit as they are. A boat with adequate flotation gives you the option of staying with the boat, and using it for support until help arrives.



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Alloy Boats and Flotation

Technical Update

By John Henry, Technical Team Leader National Marine Safety Committee

In developing the ABP standard, the NMSC was conscious of maximizing flexibility, recognizing that Australian manufacturers make boats for export to North America and Europe and that boats complying with the legal requirements of those regions are imported into Australia. As a result, the standard allows for the information on the plate to be determined in accordance with either the Australian Standard or the standards used in the USA or Europe or in accordance with another relevant national or international technical standard.

The aim is to ensure all boats have the appropriate levels of buoyancy necessary to save lives in an emergency, without restricting imports and exports by requiring boats that are meeting the more onerous overseas standards to be retested.

In 2007, the NMSC found that there was a potential anomaly when using the ISO standard (the one used in Europe) to determine the buoyancy performance for boats that rely on air chambers for buoyancy. NMSC was aware that aluminium boats that rely solely on just one integral air compartment for their buoyancy could be particularly at risk if they can't get back to shore in an emergency, noting the case of the *Malu Sara* which sank in the Torres Strait in 2005, resulting in the loss of five lives.

NMSC has now issued a technical interpretation of the ABP that includes the determination that all boats relying on air chambers for buoyancy should be tested a similar way, i.e. with the two largest air chambers opened up, regardless of which technical standard was being used for ABP purposes. In other words, a single air chamber is not deemed adequate.

The technical reasoning behind the interpretation goes like this. Any type of buoyancy has to take account of the risk of being compromised, so that it will do the job in an emergency. Foam buoyancy needs to be protected against attack by fuels and this is addressed in each of the referenced technical standards recognised by the ABP standard. For air chambers, the risk is that a slow leak will allow water into the chamber without you realising, until it's too late. A small crack or a minor ding getting the boat off the trailer could be all it takes. The nationally recognised technical standards in Australia and the USA address the risk of leaking buoyancy chambers by requiring that boats relying on air chambers be tested with the two largest air chambers flooded.

The anomaly arises because the European Recreational Craft Directive takes a different approach to minimising the risks associated with integral air chambers. As an alternative to providing redundancy to cope with a leaking tank, the Directive permits a single air tank, so long as the boat is built like the proverbial battleship. It does this firstly by requiring substantial minimum scantlings (plate thicknesses) for the hull. For a runabout, the plate thicknesses required in Europe are more like those we would expect in a commercial workboat in Australia. It also requires cockpit decks to comply with another rigorous international standard. Furthermore, every boat produced has to pass both a basic and an enhanced pressure test on each air compartment to ensure every weld and every penetration is airtight. If the air compartment of any boat off the production line fails even one of the pressure drop tests, the largest air chamber has to be left open during buoyancy testing.



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Like the legal requirements in the USA and Canada, the ABP standard doesn't mandate scantlings, deck construction requirements or pressure tests; it just requires that the boat be tested to determine basic or level flotation. However, a single integral air chamber, without all the extra safety factors applying in Europe, could leave the boat with no margin of safety, should a leak develop. As a result, the NMSC has decided that whichever technical standard is used to determine buoyancy performance, the two largest air compartments should be left open.

Having a uniform approach to determining buoyancy performance will remove uncertainty and help provide a level playing field for the marine industry.

More detailed information on this technical interpretation can be found in the Guidance Circular titled *Technical Interpretation of Buoyancy Performance of Recreational Boats in Relation to the ABP Standard*, now published on the NMSC website: www.nmsc.gov.au

How national interpretations are developed

With any performance-based safety standard, there needs to be a degree of technical interpretation and that is why the NMSC has established the national technical interpretations process. Those interpretations are decided upon by the Chief Executives of the marine authorities across the eight jurisdictions in Australia that collectively make up the NMSC. The NMSC draws upon support from the staff of its secretariat. In addition, specialist advice on naval architecture, marine surveying and about the boat manufacturing industry is provided to the NMSC by relevant members of the Technical Advisory Panel, or TAP. The TAP is composed of around 75 technical experts who have registered to participate in the process and full details are on www.nmsc.gov.au.

For commercial vessels, interpretations are applied when the vessel is checked for compliance with standards by a government-appointed surveyor prior to being allowed to go into service. For recreational boats, like other consumer products, the onus is on the supplier to ensure compliance with applicable mandatory standards (in this case the ABP standard) before putting the product on the market. The supplier is then open to prosecution if, in retrospect, a boat that's been sold is found not to comply. So boat manufacturers, faced with competitive pressures, need some certainty as to what is a fair technical interpretation and what is pushing the envelope beyond the intent of the standard. The technical interpretations process serves to provide guidance from the body that developed the standard, ie the NMSC.



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Implementation of the ABP

The Australian Builders Plate for Recreational Boats is progressively being introduced around the country through legislation and as a registration requirement.

Queensland and Western Australia were the first states to make compliance with the ABP standard a mandatory requirement when a boat is sold and South Australia followed suite in early 2008. Please check the requirements with your local marine agency.

AS 1799

The Australian Standard, AS 1799 *Small Pleasure Boats Code*, is produced in five Parts and covers a range of aspects of the design and construction of boats up to 15 metres in length. It is referenced as one of the options under the ABP standard, but it's also referenced in the National Standard for Commercial Vessels for craft under 7 metres in length.

NMSC has entered into an agreement with Standards Australia to provide project management assistance in a review of AS1799.

The various parts of AS1799 haven't been revised for at least 15 years. Since then, a great deal has changed in terms of boat design and technology and there are new and revised national and international standards around that could be drawn upon in a revision. The first project to be tackled will be Part 1 which deals with issues such as stability and flotation. Some of the issues to be considered will be:

- Whether the standard should be focused on 'small craft', rather than 'pleasure boats' to align with the international standards and reflect the fact that the standard is used for small commercial vessels.
- What the relationship should be with the suite of small craft standards issued by ISO.
- What the relationship should be with the American (ABYC) standards.

The NMSC aims to achieve nationally uniform marine safety practices and is made up of the CEOs of Australia's marine safety agencies. For further details on NMSC initiatives just go to www.nmsc.gov.au or call (02) 92472124.

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