PalletLink Newsletter

technical support for the pallet and case manufacturer & user

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KOREAN WOOD PALLETS - MARKETING INITIATIVE

The Department of Forest Science, Seoul National University, South Korea has commenced a project - *Causes of and Plans to Counter the Stagnation of Korea's Wooden-Pallet Industry*. It is supported by the Korean Pallet and Container Association. In order to do this the University seeks statistical data including European production volumes and market price of pallets and raw materials. They also seek details of the use of hire pools according to the quality and size of pallet on offer.

They are looking for information on wider market issues such as industry's steady shift to the Unit Load System. Changes in methods of pallet production and Europe's response to various restrictions, including HACCP, GMS, ISPM 15 and the pallet industry reaction to environmental issues, including the Kyoto Protocol.

They are interested in the user's position on wood pallets in relation to pallet distribution and management and SWOT analysis of wooden and plastic pallets' 'strengths, weaknesses, opportunities, and threats'. The Koreans are also considering whether to implement a pallet quality certification system.

The Seoul National University were probably encouraged in making this approach to European associations by the recent co-operation between Korea, France, Germany and UK in the major pallet testing project centred on the ISO airbag loading system. Whether that will extend to companies releasing sensitive market information is perhaps debatable.

Their queries on durability and load capacity of European pallets are more in line with Palletlink knowledge and we are considering assisting on that.

For a full copy of the Seoul National University wood pallet research proposal and Korean contact points, e-mail Palletlink.

NEW PALLETLINK TEST FACILITY

Demand from Palletlink clients (both makers and users) for testing services for pallets, boxes, roll containers and fastenings has led to the installation of new facilities at PalletLink. Up to now we hired specialist facilities at Croydon and conducted the tests ourselves, but this arrangement often left clients disappointed with long lead times. As a UKAS Assessor for timber testing laboratories, principal consultant John Harvey had the experience to set up the necessary equipment, it is now in place and been used for several clients. PalletLink members qualify for a 25% reduction in fees over non-members.

PalletLink can now test pallets to ISO 8611, nails to ISO 12777 and strength of wood species to BS 373. Members have for some time sent us specimens of timber, sometimes new sometimes suspect, and we have undertaken oven density and structure examination but now we can add compression and bending. A bonus is that it can usually be undertaken quickly.

Clients particularly value the fact that we don't just report that specimens sent for testing 'pass' or 'fail' tests but offer a more personal service. If a product is failing we can halt testing to enter into a dialogue with clients to enable design modifications to ensure that they achieve success in a retest with minimum extra cost. We find generalised test labs are often prevented from doing this by in-house rules or possibly because of lack of expertise. For Palletlink it has always been a service to members and clients to evaluate their designs and make a recommendation to ensure that the end product is suitable for purpose.

Fastening suppliers' requests have also led to us setting up for less usual measurements such as the thickness of zinc coatings on steel nails. This is especially relevant now new copper based preservatives have taken over from CCA as copper based preservatives have a corrosive tendency on steel in damp situations.

CHIPBOARD BLOCKS

We spotted a chipboard block failure during recent pallet testing and feel it necessary to remind members that chipboard or composite pallet blocks can vary enormously in quality. The materials used in the manufacture of the block can be good, bad or indifferent. Which leads us to the question - if pallet blocks are manufactured from wood chipboard or composite rather than sawn timber does the pallet have more or less strength?

The best chipboard or composite blocks are stronger than any of the common pallet block timbers used in Europe, but conversely the worst chipboard blocks can completely lose their strength or disintegrate under the influence of water or certain types of load. It depends on the quality of block you buy. A large part of the cost of a good pallet block is the adhesive that binds the chips together and some makers use too little adhesive or use a non-water resistant adhesive to reduce costs. Either can seriously affect strength. With low adhesive content blocks are usually strong enough to resist compressive vertical loads but seriously weakened for lateral loads such as are applied by the baseboards in full perimeter pallet designs. All pallets get wet and a non-water resistant adhesive will fail sooner or later in wet conditions through delamination. Loss of strength through wetting in a non-water-resistant block is irreversible - even when the block fully dries out - quite unlike timber. Some makers use more sawdust or less adhesive and a consequent lower strength results. We have experienced some East European manufactured blocks that consistently use very little resin and are very weak.

Another fault in manufacture is improper control of formaldehyde used in the curing of the adhesive and this gas continues to escape from the material even several years after production. It can cause respiratory irritation to people in an enclosed building and is strictly controlled in the EU.

Failure in a weak or wet-weakened block may involve nail pull out, the block splitting and coming apart, or in the case of a racked full perimeter base design the pulling away of that part of the block under lateral load from the baseboard.

Whether your customer asks about block durability or not, it makes little sense to buy blocks without details of the quality standards they do or don't meet. Even if you buy cheap blocks, at least as a pallet manufacturer you should know their limits and keep them out of racked full perimeter base designs where failure could cause serious collapse. As a manufacturer, if you use chipboard blocks you are required to meet EU limits for formaldehyde gas emission. You are well advised also to be aware of a blocks bond-strength and water swelling. If your supplier can't answer these questions, assume low quality.

As a chipboard block buyer you are assisted by several British or European standards so if you want to avoid guesswork then ask your supplier if his blocks at least meet one. We find BS EN 1087-1: 1995 *Particleboards - Determination of moisture resistance* the best. Although there are several others, Palletlink have found that although the test has no strength performance requirements, nevertheless a high degree of strength automatically results from good moisture resistance.

ISPM 15 NOW REQUIRED BY THESE COUNTRIES

The following countries now require compliance with ISPM 15:

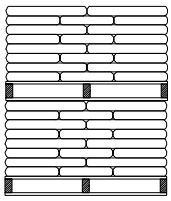
Argentina, Australia*, Bolivia, Brazil*, Bulgaria, Canada, Chile, China, Columbia, Costa Rica, Dominican Republic, Ecuador, Egypt, Guyana, Guatemala, Honduras, India, Indonesia, Japan, Jordan, Republic of Korea, Lebanon, Mexico, New Zealand, Nicaragua, Nigeria, Oman, Paraguay, Peru, Philippines, Seychelles, South Africa, Syria, Taiwan, Penghu and Matsu, Turkey, Ukraine, USA

*Australia has additional debarking & fumigation requirements on top of ISPM 15 that registrants of the UK marking programme already meet. Australia also has tough requirements for plywood used in packaging.

*Brazil - although wood packaging treated and marked to ISPM 15 standards will meet Brazil's requirements, it will need to have a phytosanitary certificate issued by the Forestry Commission accompanying it.

EU countries do not require other EU countries to treat pallets for internal traffic, just to ensure bark is removed.

LENGTH AND WIDTH OF PALLETS



With a bearer pallet, some in our industry have difficulty in understanding which side of the pallet is length and which side is width.

Now that all British, European (CEN) and Worldwide standards (ISO) have adopted the same convention it should start to become easier. In the drawing here you are looking at the pallet *WIDTH*.

The rule to remember is that irrespective of how short a bearer or stringer is, the side that the bearer or stringer runs is the *LENGTH* and length is always quoted *FIRST*, eg. A Europallet with the usual 800 stringer is described as 800 x 1200mm.

VMF GLASS PALLET

Continuing our series of lesser known yet widely used overseas pallets we introduce here the VMF glass pallet. The VMF glass pallet is said to be a 1 tonne payload pallet, it is of French origin 1000 x 1200 mm 9 block pallet and all outer blocks are slightly inset to allow shrink-wrapping to grip under the top deck while still enabling unrestricted fork access. It is a light, versatile 4 way entry full-perimeter pallet, used by manufacturers and users of glass bottles particularly wine and mineral water producers. It operates in an 'open pool' and there are some 5 to 6 million in circulation in and around France. When air dried the VMF weighs 20 kg in European redwood, 16.6 kg in UK spruce.

The VMF is organised like the Europallet and CP Pallet pools through a manufacturers licensing scheme through the Fédération des Chambres Syndicales de l'industrie du Verre. The name VMF comes from the Federations former title, Verreries Mécaniques de France. Several UK companies offer VMF pallets for sale.

The scheme is not closely monitored and the precise specification is hard to come by. The VMF is not an official European CEN standard pallet, nor a French AFNOR standard, however that means little as there are pallet designs that are not formal European standards, such as Chep, LPR and CP and they are all hugely popular. However, unlike the CP the VMF specification is not made publicly available. Even the French Pallet Association SYPAL has no VMF details on their website.

CEN AND PALLET FINGER TRAPS

We reported in the last Newsletter that the Finnish standards body had initiated work with CEN, the European Standards body, intended to remedy what they consider unsafe finger-traps due to the 1000 x 1200 EN 13698-2 pallet having deckboard gaps between 21 and 31mm. They are suggesting deckboard gaps no smaller than 29mm. Although Finnish standards proposed a new design it was not liked on practical grounds by Austria who proposed another design which was practical and which by creating smallest gaps of 39mm met the Finnish concerns. Germany, Portugal, Sweden and the UK support the proposed Austrian design and expect to support it in the imminent formal CEN ballot.

There are no plans to prohibit gaps between 21 and 31mm in pallets in other EN standards but you should be aware of the safety issue if you use or manufacture pallets with those gaps. The draft CEN Finnish and Austrian drawings for information or comment are available from Palletlink by e-mail or post.

SHIPPING IN ISO FREIGHT CONTAINERS

How many one-litre bottles of mineral water would fit on a 1200 x 1000 pallet in a 30 foot ISO freight container? This might be regarded as an unfair question for a pallet buyer to ask a pallet maker. However, when it is for a good customer it is quite normal for a member to ask Palletlink to give the answer and this is a question which we consider part of our membership service. We are often asked variations on this theme.

In that particular case we used our database of internal dimensions of freight containers and CAD software and were able to give the answer based on a 310mm bottle in 3 layers and stacking 2 unit-loads high for 30 pallets per container.

Each pallet took 243 per layer in 3 layers for 729 per pallet. This meant 21,870 bottles per 30 foot container.

Another recent question was - how many nested (50% inverted) empty Europallets pallets fit into a container? If you are a PalletLink member we are happy to respond to questions like that, we normally try to reply the same day.