



## SEMA Technical Bulletin No. 1

### **Racking Repairs involving the straightening of bent material**

SEMA are aware of offerings in the market place where damaged material is straightened and returned to service with various claims being made relating to the strength of the repair compared with the strength of the original material. As an organisation we are concerned that such repairs can have a catastrophic effect on the resilience of the structure in the event of further accidental impact and therefore offer the following guidance.

SEMA believe that there are presently four main offerings in the market and would comment on them as follows.

#### **Option 1: Any repair involving welding**

Such repairs are not recommended.

#### **Option 2: For secondary members only (i.e. frame bracings)**

The original manufacturer of the racking may be willing to train and certify operatives to carry out a straightening operation which then is reinforced with a metal sleeve around the damaged area of the section. A warranty must be provided by the supplier that such repairs carried out by formally qualified people meet the requirements of the SEMA Codes of Practice and are covered by that company's product warranty even after the repairs have been carried out.

It is essential for such repairs that an appropriate QA procedure is in place; this shall include a record of the operative who carried out the repairs and his qualifications in order that it can be demonstrated that repairs have been carried out in accordance with the manufacturer's instructions.

#### **Option 3: For main structural members (specifically racking uprights)**

The original manufacturer of the racking may be willing to train and certify operatives to cut out a damaged lower section of upright and splice in a new piece of upright using a manufacturer's approved and tested joining unit. Again a warranty is provided by the manufacturer that repairs carried out by qualified people meet the requirements of the SEMA standard and are covered by that company's product warranty even after the repairs have been carried out.

It is essential for such repairs that an appropriate QA procedure is in place; this shall include a record of the operative who carried out the repairs and his qualifications in order that it can be demonstrated that repairs have been carried out in accordance with the manufacturer's instructions.

**Option 4: For main structural members (specifically racking uprights)**

An independent organisation provides a repair method based upon bending the material, back into its original shape. It is claimed this approach is backed up by third party testing which demonstrates adequate strength of the section. Insurance cover of the work carried out is normally provided although this may only cover the repair work rather than any consequential losses caused by any subsequent problem.

This kind of repair may invalidate any warranty or guarantee provided by SEMA members in relation to the structure. Consequently, SEMA do not advise this method as an acceptable means of repair and Users should be aware that they adopt this method at their own risk.

**SEMA, as stated in the various codes of practice generally recommend the repair of damaged racking by the replacement of damaged components with new undamaged component parts. This in our opinion is the safest and best way to effect repairs.**

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