



Opportunity through Innovation



Centaur
Cable Saddle

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(International Patents and Design registrations pending)



Short-circuit Test Rig, KEMA 2008



Centaur cable saddles have been designed as a solution for cleating large diameter HV cables used in Power Transmission Systems typically 275kV and 400KV. The product is designed for supporting cables with diameters from 100mm to 162mm from support steelwork at centres of up to 8.4m. The saddles have been short-circuit tested at 63kA RMS for 1 second. A full range of intermediate straps is also available.

Design Features

Centaur consists of an extruded and pressed aluminium saddle and a hinged aluminium overstrap. The ends of the saddle are flared so that the cable never comes in contact with a sharp edge and the overstrap incorporates an LSOH polymeric liner, which cushions the cable in the event of a short-circuit. All the fixing bolts are in 316L stainless steel. To eliminate the possibility of galvanic corrosion all dissimilar metals are isolated from each other by injection moulded separation washers. The saddles are available in lengths of 400, 600 & 800mm to allow for different cable diameters and mounting centres.

Testing

Centaur saddles and intermediate straps were short-circuit tested at KEMA in Arnhem Holland in July 2008, using the commonly recognized National Grid requirement of 63kA RMS for a minimum of one second as an objective. Tests were passed on both three phase and phase to phase faults at 63kA RMS, 163kA peak. A copy of the full independent report from KEMA is available on request.

Centaur has also been successfully tested for corrosion resistance having been subjected to an independent salt spray test carried out in accordance with BS EN 9227:2006 Corrosion tests in artificial atmospheres.

Mounting Options

Mounting options are almost unlimited and are project specific. The saddle can be directly fixed to lugs welded to the supporting structure or may be supported on a bracket made from aluminium or galvanized steel. Centaur may be installed rigidly or in such a way to allow it to pivot vertically, horizontally or both. (Observations of cable movement during short-circuit tests suggest that the latter option would be preferable).



Installation

In most cases Centaur will be used in tunnel applications where access to the side of the saddle nearest the wall will be restricted. The saddle is designed to be fixed to the support steelwork before cable installation. The hinged overstrap is installed once the cable is in place. All fixings are on the visible side of the saddle so there is no risk of tools having to be used over the top of the cable. As an optional extra, a roller system can be provided to facilitate cable installation.

Part Number	Cable range Dia. (mm)	Length of Cable Saddle
CS100-112/400	100-112	 400mm
CS108-122/400	108-122	
CS120-132/400	120-132	
CS128-142/400	128-142	
CS140-152/400	140-152	
CS148-162/400	148-162	
CS100-112/600	100-112	 600mm
CS108-122/600	108-122	
CS120-132/600	120-132	
CS128-142/600	128-142	
CS140-152/600	140-152	
CS148-162/600	148-162	
CS100-112/800	100-112	 800mm
CS108-122/800	108-122	
CS120-132/800	120-132	
CS128-142/800	128-142	
CS140-152/800	140-152	
CS148-162/800	148-162	



Intermediate
Spacers

Roller
System





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