



Learning from incidents

ACTION ALERT

Immediate Action Required:
Remove from Service "Weissenfels" and "KWB" Multirings marked "LWA" and "IWA"

GRP-AC-201101

All Shell Businesses

June 2011

Target audience for this alert

- Supervisors of lifting operations
- Lifting and Hoisting SMEs

What happened

In early February 2011 one ring (master link) supplied as a component of a four leg wire rope sling set for a 35 t load failed in Shell Todd Oil Services Ltd, New Zealand. This link was one of two sub-master links in the assembly (i.e. it had two wire sling thimbles through it). When this link failed, it was lifting the support frame only (approximately 5 tonnes).

After this incident the rings / multirings of other lifting equipment were checked and another three master links in service from the same manufacturer (Weissenfels) were identified which had similar severe cracking.

The cracking appears to have emanated from the inside of the link at both the six and twelve o'clock positions.

Why it happened

In 2010, Weissenfels changed ownership. In the opinion of the new owner, the cause of the cracks and the consequential breaks was due to an improper quenching treatment, from which the rings emerged with higher hardness figures than those prescribed by the internal technical specifications (see Weissenfels tech-chain S.p.A. recall letter (attached)).

Two production lots are affected: Rings marked "IWA" or "LWA" form "Weissenfels" or "KWB". Note: Weissenfels also manufactured rings for KWB.

Lessons learned

The new owner of Weissenfels has stated that it has inspected and created controls in the production process that it believes will prevent products from leaving its factory if they do not conform to international technical specifications (see Weissenfels tech-chain S.p.A. recall letter (attached)).



Cracked masterlink
Manufacturer: Weissenfels

Markings:
Top: D38 (38mm diameter); Grade 100
Bottom: "ITALY LWA"



Goal Zero: Zero injuries, Zero fatalities

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Actions

1. Check and remove from service chain rings and multirings from “Weissenfels” or “KWB” with the letters “IWA” or “LWA” on them.
2. For chains branded “Weissenfels” contact Weissenfels tech-chains S.p.A. for a replacement as per their recall letter (refer to attachment to this alert). For chains branded “KWB” contact the vendor from whom the chains were purchased.

Action parties for both actions: Supervisors of Lifting Operations

Target date: Immediately.

Example photos of affected rings (note that markings are important, not colours):



Weissenfels Grade 80 (red)



Weissenfels Grade 10 (grey)



KWB with “IWA” marking

Further information

- Contact [Walter Rawlings](#) (Global SME Lifting and Hoisting)
- Weissenfels tech-chain S.p.A. recall letter (attachment overleaf)



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Messrs:

**SHELL INTERNATIONAL EXPLORATION
AND PRODUCTION B.V.**

PO BOX 162, 2501 AN THE HAGUE

THE NETHERLANDS

Esteemed Customer,

As you know, in January 2010, our group has entered into a purchase agreement, and subsequently in June 2010 officially purchased the company Weissenfels, long standing producer of lifting chains, after and extended period of unsatisfactory prior ownerships.

After more than a year, we can satisfactorily make an initial evaluation, both for the economic results evidenced by the 2010 balance sheet, just recently approved with a resulting profit and, above all, for the work of restructuring and relaunching of the company which has led us to rekindling previous commercial relationships and opening new distribution channels and to significantly improving the efficiency of our machines and production and the quality and service of our products.

From a juridical standpoint, our company was established by notarized deed on 18 November 2009 and was registered with the business registry of Udine with no. 272825, therefore not having any link or ties to the previous entities which have owned and managed the company, particularly with Weissenfels s.p.a. in liquidation, actually subjected to the procedure of preventive agreement before the court of Tolmezzo, which, exactly, under the supervision of the Italian judiciary authorities, sold us the company and its related stock of previous production.

Within the stocks taken over by us, we found a number of Master Links and Sub Assemblies with production lot numbers prior to 2010, that means produced before our purchase of the company, which displayed an inadequate heat treatment, leading to consequent cases of breakage.

The cause of the cracks and the consequential breaks was due, in our opinion, to an improper quenching treatment, from which the rings emerged with higher hardness figures with respect to those prescribed by the internal technical specifications. It is quite probable that an indeterminate number of rings were quenched in the oven where previously were carried out case hardening cycles (heat treatment which gives a very high superficial hardness for resistance to wear), but subsequently the oven was not sufficiently cleaned of the case hardening atmosphere. The increase in the superficial hardness of the rings, which must sustain very high stress levels, was subject to cracks on the hardened surface, and following the spreading of the same, subsequently to breaks.

We immediately made the necessary inspections and controls on the production process and we are able to categorically exclude the possibility that defective products, more precisely, products not conforming to international technical specifications, can leave our factory.

On this basis, and with the singular objective of protecting the good name of the Weissenfels brand and the safety and well being of our customers, in terms of transparency and openness, we have decided to proceed with the recall of the following products:



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Size	Description	code	lots
36	MASTER LINK W16-8 GRADE 8	W16-8	IWA/LWA
	OBLONG MASTER LINK W2018-8 GRADE 8	W2018-8	IWA/LWA
38	MASTER LINK ASSEMBLY D38LF26 GREY GRADE 10	D38LF26	IWA/LWA
	OBLONG MASTER LINK D38 GREY GRADE 10	D38	IWA/LWA
	MASTER LINK ASSEMBLY D38L26 GREY GRADE 10	D38L26	IWA/LWA
	MASTER LINK ASSEMBLYD38EF32 GREY GRADE 10	D38EF32	IWA/LWA
	SPECIAL OBLONG MASTER LINK T2220-8 RED GRADE 8	T2220-8	IWA/LWA
	MASTER LINK ASSEMBLY D38E32 GREY GRADE 10	D38E32	IWA/LWA
	MASTER LINK ASSEMBLY S16-8-8 RED GRADE 8	S16-8	IWA/LWA
40	MASTER LINK ASSEMBLY T16-8-8 RED GRADE 8	T16-8	IWA/LWA
	MASTER LINK ASSEMBLY W18-8 RED GRADE 8	W18-8	IWA/LWA
40	MASTER LINK TN40 GREY GRADE 10	TN40	IWA/LWA
	OBLONG MASTER LINK W2220-8 RED GRADE 8	W2220-8	IWA/LWA
	MASTER LINK ASSEMBLY CM40L22D GREY GRADE 10	CM40L22D	IWA/LWA
	OBLONG MASTER LINK W2622-8 RED GRADE 8	W2622-8	IWA/LWA
45	OBLONG MASTER LINK T2622-8 ROSSO GRADO 8	T2622-8	IWA/LWA
	MASTER LINK TN45 GREY GRADE 10	TN45	IWA/LWA
	MASTER LINK W2622-8 RED GRADE 8	W2622-8	IWA/LWA
	MASTER LINK W20-8 RED GRADE 8	W20-8	IWA/LWA
	OBLONG MASTER LINK D45 GRADE 10	D45	IWA/LWA
	OBLONG MASTER LINK T2622-8 RED GRADE 8	T2622-8	IWA/LWA
	MASTER LINK ASSEMBLY T20-8 RED GRADE 8	T20-8	IWA/LWA
	OBLONG MASTER LINK W3226-8 RED GRADE 8	W3226-8	IWA/LWA
	SPECIAL OBLONG MASTER LINK T3226 RED GRADE 8	T3226-8	IWA/LWA
	MASTER LINK ASSEMBLYW22-8 RED GRADE 8	W22-8	IWA/LWA
50	MASTER LINK ASSEMBLY D50L32 GREY GRADE 10	D50L32	IWA/LWA
	MASTER LINK ASSEMBLY D50L36 GREY GRADE 10	D50L36	IWA/LWA
	OBLONG MASTER LINK D50 GRADE 10	D50	IWA/LWA
	OBLONG MASTER LINK E50 GRADE 10	E50	IWA/LWA
	MASTER LINK ASSEMBLYT22-8 RED GRADE 8	T22-8	IWA/LWA
	MASTER LINK ASSEMBLY E50D38 GREY GRADE 10	E50D38	IWA/LWA
	MASTER LINK ASSEMBLY D56L36 GRADE 10	D56L36	IWA/LWA
	MASTER LINK ASSEMBLY D56D38 GREY GRADE 10	D56D38	IWA/LWA
56	MASTER LINK ASSEMBLY D56D45 GREY GRADE 10	D56D45	IWA/LWA
	MASTER LINK ASSEMBLY T26-8 RED GRADE 8	T26-8	IWA/LWA
	MASTER LINK ASSEMBLY W26-8 RED GRADE 8	W26-8	IWA/LWA
	OBLONG MASTER LINK W4036-8 RED GRADE 8	W4036	IWA/LWA
	OBLONG MASTER LINK D60 GRADE 10	D60	IWA/LWA
60	SUB ASSEMBLY D60L40 GRADE 10	D60L40	IWA/LWA
	MASTER LINK ASSEMBLY D60D50 GREY GRADE 10	D60D50	IWA/LWA



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weissenfels

The recall process will proceed in the following way:

- 1) The customer is kindly requested to advise us by e-mail as to the quantity and type of Masterlinks and/or Sub Assemblies as per above list;
- 2) Weissenfels Tech-Chains s.p.a. will ship to the customer new Masterlinks and/or Sub Assemblies, of the type and quantity indicated, guaranteeing the absolute quality according to the actual norm specifications.
- 3) Once the new pieces are received, the customer will return to Weissenfels Tech Chains s.p.a the old OML/SA, in the same type and quantity as those replaced, debiting all relative costs of transport and shipment.
- 4) Our service of technical assistance will remain at the complete disposal of our customers to supply any clarifications required as well as the appropriate suggestions for improving the use of the OML + SA, also with reference to the different atmospheric conditions present during use.

We are confident that the above will be to your complete satisfaction and will correspond to the criteria of a complete and loyal cooperation to which we aspire with our customers and we remain at your disposal for any eventual information or assistance which you may require.

Sincerely Yours,

WEISSENFELS TECH-CHAINS s.p.a.

The Management

Tarvisio, 24/06/2011

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