KATRADIS VEP SA
MARINE & INDUSTRIAL EQUIPMENT
WORLDWIDE

EST. 1936

WLL OF SLINGS AS PER EN 13414

NON PERMANENT REDUCTION OF WLL OF WIRE ROPE SLINGS FOR ELEVATED TEMPERATURES (WLL'S ARE RESTORED WHEN SLINGS RETURN TO AMBIENT TEMPERATURE)

TERMINATION TYPE	FERRULE MATERIAL	ROPE CORE	REDUCTION OF WORKING LOAD LIMIT EXPRESSED AS % OF THE WLL OF THE SLING					
			TEMPERATURE, T, ^{0}C					
			40<T<100	100<T<150	150<T<200	200<T<300	300<T<400	T>400
TURN BACK EYE	ALUMINIUM	FIBER	100	DO NOT USE	DO NOT USE	DO NOT USE	DO NOT USE	DO NOT USE
TURN BACK EYE	ALUMINIUM	STEEL	100	100	DO NOT USE	DO NOT USE	DO NOT USE	DO NOT USE
FLEMISH EYE	STEEL	FIBER	100	DO NOT USE	DO NOT USE	DO NOT USE	DO NOT USE	DO NOT USE
FLEMISH EYE	STEEL	STEEL	100	100	90	75	65	DO NOT USE
HAND SPLICE	-	FIBER	100	DO NOT USE	DO NOT USE	DO NOT USE	DO NOT USE	DO NOT USE
HAND SPLICE	-	STEEL	100	100	90	75	65	DO NOT USE

INSPECTION BEFORE EACH USE: AN INSPECTION IS A VISUAL EXAMINATION ON THE CONDITION OF THE SLING TO IDENTIFY ANY OBVIOUS DAMAGE OR DETERIORATION THAT MIGHT AFFECT ITS FITNESS FOR USE. THE SLING MUST BE WITHDRAWN FROM SERVICE AND REFERRED TO A COMPETENT PERSON FOR THOROUGH EXAMINATION IF ANY OF THE FOLLOWING IS OBSERVED BEFORE EACH USE:

A) ILLEGIBLE SLING MARKINGS, IE SLING IDENTIFICATION AND/OR WORKING LOAD LIMIT ,
B) WEAR, DISTORTION AND/OR CRACKING OF THE UPPER OR LOWER TERMINALS AND OR FERRULES
C) CONCENTRATION(S) OF BROKEN WIRES
D) SEVERE ROPE DISTORTION, SUCH AS KINKS OR PROTRUSION OF THE CORE
E) SIGNIFICANT ROPE WEAR
F) CORROSION
G) HEAT DAMAGE

THE SLING MUST BE ***WITHDRAWN FROM SERVICE*** IF ANY OF THE FOLLOWING ARE PRESENT, REACHED OR EXCEEDED:

1) THE SLING MARKINGS (SUCH AS INFORMATION ON THE SLING IDENTIFICATION AND/OR THE WLL) ARE ILLEGIBLE
2) WEAR, DISTORTION OR CRACKING OF THE UPPER OR LOWER TERMINALS. PARTICULAR ATTENTION SHOULD BE PAID TO SIGNS OF OPENING UP, DISTORTION OR CRACKING OF THE HOOK, DISTORTION AND WEAR OF LINKS OR THE CLOSING OF THE THIMBLE, INDICATIONS THAT THE SLING MAY HAVE BEEN OVERLOADED
3) WEAR, DISTORTION OR CRACKING OF FERRULES OR THE PULLING OUT OF A SPLICE
4) BROKEN WIRES: THIS IS A DETRIMENTAL CONDITION, BECAUSE OF THE POSSIBILITY OF INJURY TO THE USER'S HANDS AND OF THE LOSS OF STRENGTH IN THE ROPE. BROKEN WIRES ARE USUALLY CAUSED BY MECHANICAL DAMAGE, ALTHOUGH CORROSION MAY ALSO BE A FACTOR. THE APPEARANCE OF WELL DISTRIBUTED BROKEN WIRES MAY HAVE NO MARKED EFFECT ON THE STRENGTH OF THE SLING BUT THE DISCARD CRITERIA (SEE BELOW) MUST BE ADOPTED FOR RANDOMLY DISTRIBUTED BROKEN WIRES AND CONCENTRATED BROKEN WIRES RESP. IN ORDER TO PREVENT INJURY TO THE USER'S HANDS, PROTRUDING WIRES CAN BE BROKEN OFF IN THE VALLEYS BETWEEN THE STRANDS BY REVERSE BENDING THE WIRE, WITH THE HELP OF PLIERS, UNTIL FRACTURE OCCURS. SUCH ACTIONS MUST BE RECORDED.

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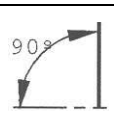
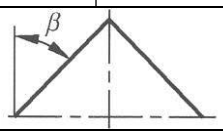
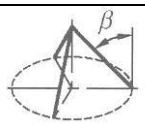
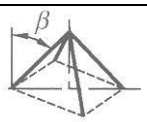
5) RANDOMLY DISTRIBUTED BROKEN WIRES: 6 RANDOMLY DISTRIBUTED BROKEN OUTER WIRES IN A LENGTH OF 6d BUT NO MORE THAN 14 RANDOMLY DISTRIBUTED BROKEN WIRES IN A LENGTH OF 30d, WHERE d IS THE NOMINAL ROPE DIAMETER
6) CONCENTRATED BROKEN WIRES: 3 ADJACENT BROKEN OUTER WIRES IN ONE STRAND
7) ROPE DISTORTION: KINKING, CRUSHING, BIRDCAGING OR CORE PROTRUSION OR OTHER DAMAGE WHICH DISTORTS THE ROPE STRUCTURE. THE MAIN THING TO LOOK FOR IS WIRES OR STRANDS THAT ARE PUSHED OUT OF THEIR ORIGINAL POSITIONS IN THE ROPE. SLIGHT BENDS IN A ROPE WHERE WIRES OR STRANDS ARE STILL RELATIVELY IN THEIR ORIGINAL POSITIONS WOULD NOT BE CONSIDERED SERIOUS DAMAGE.
8) ROPE WEAR: 10% OF THE NOMINAL ROPE DIAMETER (d)
9) CORROSION: PITTING OF THE WIRES OR LOSS OF FLEXIBILITY OF THE ROPE DUE TO SEVERE INTERNAL CORROSION. CORROSION MAY OCCUR WHERE SLINGS HAVE BEEN IMPROPERLY STORED OR HAVE BEEN USED IN PARTICULARLY CORROSIVE CONDITIONS, SUCH AS MOVING LOADS IN AND OUT OF ACID/ALKALI BATHS. THE EFFECT IS READILY IDENTIFIED THROUGH THE LOSS OF FLEXIBILITY AND ROUGHNESS TO THE TOUCH. WHILE LIGHT SURFACE RUSTING IS UNLIKELY TO AFFECT THE ROPE STRENGTH, IT MAY BE INDICATIVE OF INTERNAL CORROSION, THE EFFECT OF WHICH IS NOT PREDICTABLE.
10) HEAT DAMAGE AS EVIDENCED BY DISCOLORATION OF THE WIRES, LOSS OF LUBRICATION OR PITTING OF THE WIRES CAUSED BY ELECTRIC ARCING

		WLL FOR STEEL WIRE ROPE SLINGS, 1770 GRADE				
	Single leg	Two leg		Three and four leg		Endless ferrule secured sling
Angle to the vertical, β	0^0	0^0 to 45^0	Over 45^0 to 60^0	0^0 to 45^0	Over 45^0 to 60^0	0^0
						
	Direct					Choke hitch
Nominal rope diameter, d	Working Load Limits, kgs (Fiber core for 6x19 & 6x36 class / IWRC core for 6x19IWRC, 6x36IWRC & 8x36IWRC class)					
mm	Kgs	Kgs	Kgs	Kgs	Kgs	Kgs
8	700/750	950/1050	700/750	1500/1550	1050/1100	1100/1200
9	850/950	1200/1300	850/950	1800/2000	1300/1400	1400/1500
10	1050/1150	1500/1600	1050/1150	2250/2400	1600/1700	1700/1850
11	1300/1400	1800/2000	1300/1400	2700/3000	1950/2120	2120/2250
12	1550/1700	2120/2300	1550/1700	3300/3550	2300/2500	2500/2700
13	1800/2000	2500/2800	1800/2000	3850/4150	2700/3000	2900/3150
14	2120/2250	3000/3150	2120/2250	4350/4800	3150/3400	3300/3700
16	2700/3000	3850/4200	2700/3000	5650/6300	4200/4500	4350/4800
18	3400/3700	4800/5200	3400/3700	7200/7800	5200/5650	5650/6000
20	4350/4600	6000/6500	4350/4600	9000/9800	6500/6900	6900/7350
22	5200/5650	7200/7800	5200/5650	11000/11800	7800/8400	8400/9000
24	6300/6700	8800/9400	6300/6700	13500/14000	9400/10000	10000/10600
26	7200/7800	10000/11000	7200/7800	15000/16500	11000/11500	11800/12500
28	8400/9000	11800/12500	8400/9000	18000/19000	12500/13500	13500/14500
30	9700/10400	13400/14500	9700/10400	20750/22000	14500/15500	15750/16750
32	11000/11800	15000/16500	11000/11800	23500/25000	16500/17500	18000/19000
34	12500/13400	17000/18750	12500/13400	26250/28250	18750/20000	20250/21250
36	14000/15000	19000/21000	14000/15000	29000/31500	21000/22500	22500/23500
38	15500/16750	21250/23500	15500/16750	32500/35250	23500/25250	25250/26750
40	17000/18500	23500/26000	17000/18500	36000/39000	26000/28000	28000/30000
42	19000/20500	26250/28750	19000/20500	40000/43000	28750/30750	30750/33000
44	21000/22500	29000/31500	21000/22500	44000/47000	31500/33500	33500/36000
46	23000/24250	32000/34250	23000/24250	48000/51000	34250/36750	36750/39000
48	25000/26000	35000/37000	25000/26000	52000/55000	37000/40000	40000/42000
50	27000/28750	37500/40500	27000/28750	57000/60500	40500/43500	43500/46000
52	29000/31500	40000/44000	29000/31500	62000/66000	44000/47000	47000/50000
54	31250/33750	43500/47000	31250/33750	66500/71000	47000/50500	50500/54000
56	33500/36000	47000/50000	33500/36000	71000/76000	50000/54000	54000/58000
58	36250/39000	50500/54000	36250/39000	76000/82000	54000/58500	58500/62500
60	39000/42000	54000/58000	39000/42000	81000/88000	58000/63000	63000/67000
Leg factor, K_1	1	1,4	1	2,1	1,5	1,6

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