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HOW CALCULATE BUNCHING LAY-LENGTHS

How calculate the behaviour of the lay-length of an already bunched wire in case of a previous bunching. All the references will be made on number of lay-lengths contained in 1 meter of cable in mm. **(This behaviour is obtained only with pay-offs without back twist.)**

$$\text{N° LAY-LENGTHS FOR METER} = \frac{1000}{\text{LAY-LENGTH}}$$

$$\text{EXAMPLE: A CABLE WITH LAY-LENGTH 78 mm HAS: } \frac{1000}{78} = 12,82 \text{ lay-lengths/meter}$$

TO EXTEND THE LAY-LENGTH

I HAVE TO BUNCH IN THE OPPOSITE DIRECTION
WHICH LAY-LENGTH I NEED TO OBTAIN?

100 mm.

HOW MANY LAY-LENGTHS THERE ARE FOR METER ON THE FINAL CABLE WITH LAY LENGTH 100

$$\frac{\text{METER}}{\text{LAY-LENGTHS}} = \frac{1000}{100} = 10 \text{ lay-lengths/meter}$$

HOW MANY LAY-LENGTHS THERE ARE ON THE CABLE ALREADY DONE

$$\frac{\text{METER}}{\text{LAY-LENGTHS}} = \frac{1000}{78} = 12,8 \text{ lay-lengths/meter}$$

IF I WANT 10 LAY-LENGTHS AND I HAVE 12,8 I WILL HAVE TO REMOVE 2,8

WHICH LAY-LENGTH I HAVE TO DO TO REMOVE 2,8 lay-lengths/meter

$$\frac{1000}{2,8} = 357 \text{ mm. (lay-lengths to set)}$$

TO OBTAIN A FINAL LAY-LENGTHS OF 100 mm.

TO SHORTEN THE LAY-LENGTH

I HAVE TO BUNCH IN THE SAME DIRECTION.
WHICH LAY-LENGTH I NEED TO OBTAIN?

50 mm.

HOW MANY LAY-LENGTHS THERE ARE FOR METER ON THE FINAL CABLE WITH LAY LENGTH 50

$$\frac{1000}{50} = 20 \text{ lay-lengths/meter}$$

HOW MANY LAY-LENGTHS THERE ARE ON THE CABLE ALREADY DONE

$$\frac{1000}{78} = 12,8 \text{ lay-lengths/meter}$$

IF I WANT 20 LAY-LENGTHS ON A CABLE AND I HAVE 12,8 LAY-LENGTHS I WILL HAVE TO ADD

$$20 - 12,8 = 7,2 \text{ lay-lengths/meter}$$

WHICH LAY-LENGTH I HAVE TO DO

$$\frac{1000}{7,2} = 138 \text{ mm. (lay-lengths to set)}$$

TO OBTAIN A FINAL LAY-LENGTHS OF

50 mm.