| PDF A    | Ordering, Shipping, Designation, Definition         | C:\ Handbook/06-              |
|----------|---|-------------------------------|
| 01-01-02 | Standards   | 04-EN 12385-2-<br>Berichte-01 |
|          | Steel Wire Ropes, Their Terminations and Slings     |                               |
| 6.4.1    | EN 12385 Steel Wire Ropes – Safety                  | Page 1 of                     |
|          | Part 2: Definitions, designation and classification | 2005-04-29                    |

## What is different and misunderstanding in EN 12385

|         | There is no system in the designation, symbol part. The old English abbreviation has      |  |
|---------|---|--|
|         | been introduced for all other languages.  |  |
|         | Errors which can be made today:   |  |
| 3.6.1.3 | Rotation resistant ropes. There is no differentiation anymore between Rotation            |  |
|         | resistant ropes and low rotation ropes.   |  |
| 3.2.1   | Definition Strand: an element of rope normally consisting of an assembly of wires of      |  |
|         | appropriate shape and dimensions laid helically in the same direction on one or more      |  |
|         | layers around a centre  |  |
| 3.6.2.1 | Spiral rope:  |  |
|         | An assembly of at least two layers of wires laid helically over a centre usually a round  |  |
|         | wire. At least one layer is closed in the opposite direction (contra lay)                 |  |
| 3.6.2.2 | Spiral strand rope  |  |
|         | Spiral rope comprising only round wires. Spiral strand rope was called up to now::        |  |
|         | multi layer strand rope (rotation resistant rope).  |  |
|         | Prof. K. Feyrer. Drahtseile Bemessung, Betrieb, Sicherheit Page 36 Two and tree           |  |
|         | layer round stranded ropes are called "Spiral round strand ropes". This was also the      |  |
|         | definition in DIN   |  |
|         | A 7 wire construction is strand and not a spiral strand rope. see Definition for spiral   |  |
|         | strand ropes 3.6.2.1  |  |
| 3.8.6   | Contra Lay: rope in which at least one layer of wires in a spiral or one layer of strands |  |
|         | in a stranded rope is laid in the opposite direction to the other layers                  |  |
| 3.3.3   | Steel core (WC)   |  |
|         | Core made from steel wires arranged as a round strand (WSC) or as an independent          |  |
|         | strand rope (IWRC)  |  |
|         | Ropes with "parallel closed steel core" are now "parallel closed stranded                 |  |
|         | ropes"  |  |
|         | Prof. K. Feyrer. Drahtseile Bemessung, Betrieb, Sicherheit Page 29 Steel cores            |  |
|         | parallel closed SESP. This was valid for all literature                                   |  |
| 3.6.1.4 | Parallel closed stranded rope:  |  |
|         | Rope consisting of at least two layers of strands laid helically in one closing operation |  |
|         | around a strand or fibre centre.  |  |
| 4.3.3   | Table 4: parallel closed ropes. Parallel wire rope centre PWRC                            |  |
|         | Table 7 parallel closed ropes. B.2.2.3 parallel closed ropes                              |  |
|         | 12385-4 shows no tables for parallel closed ropes.  |  |
|         | This construction is also not anymore a rope with steel core. By definition it is a       |  |
|         | multiple layer rope. That means that the discarding criteria for multi layer rope         |  |
|         | construction are now valid.   |  |
| EN      | All wires of the same size and shpe in the same wire layer shall be of the same           |  |
| 12385-1 | tensile strength grade.   |  |
| 5.1.1.1 | Remarks: Different tensile strenght for different wire diameter, used in the right way    |  |
|         | will improve the rope quality. In the USA this is normal practice because the the         |  |
|         | fundamental steel curve.  |  |