

BARRY PUBLICATION

## **Rope and Netting Systems Design 5 Golden Rules**

## 5 Golden Rules for Rope and Netting Systems

Every day, hundreds of workers in dozens of industries around the world are protected by **Barry Rope** and **Netting** Systems. From the oil and mining industries, to pulp and paper, metal producers, the marine and military industries, stuntmen in the movies, and so many more, the life of these workers relies on the performance of the design of these rope and netting systems.

To have a safe system to hold, pull or stop any kind of energy, there are basic rules that must be followed and known by the user of the rope and netting systems.

Over the years, the **Barry team** has earned experience in finding the best solution by choosing the most appropriate fiber, diameter and finishing types for its rope and netting systems. In this **Barry publication**, we briefly highlight the 5 essential points in the process of designing the best rope and netting systems.

Regardless of the application, these 5 golden rules will be helpful to you.

### **Golden Rule # 1: Safety above all else!**

The owner of the rope and netting system, as well as the users, must use the system responsibly and continuously place security at the forefront of all their plans and actions. An accident can happen very quickly and the risk of serious injury due to faulty installations or misuse of equipment is very high.

### **Golden Rule # 2: Plan your system carefully**

This step is crucial: lack of understanding of the application, the safety needs, the energy involved and the scope of the system can and will result in an unsafe system for the users, and increase liability to the owner.

#### **The planning includes, but doesn't limit itself to, determining:**

- What is the application?
- What is the ultimate performance needed in the worst-case scenario?
- What are the environmental and chemical risks present?
- What is the life expectancy?
- How many inspections and what type of inspection needs to be planned for a given application and site?
- Does it have to be removable, reusable or relocatable?
- Who will do the installation and how fast does it need to be installed?

### **Golden Rule # 3: Design and certification of the system**

Rope and netting systems design shall always remain a great challenge; there are very few qualified persons in the world that can thoroughly produce the right design and type of rope and netting systems.

Barry, with over 30 years of experience, has earned the know-how to help qualified persons with an appropriate design process.

#### **Here are our key findings in the design process:**

- Identify the exact application and performance needed by the rope and netting systems.
- Identify the mass or energy with great details when possible.
- For low energy and well-known applications, it is possible to choose the appropriate diameter of fiber and finishing by applying an estimated safety factor.
- For high energy and multi-factor problems – including the strength and weight of the supporting structure, and the dispersion and dissipation of the energy – we recommend to do a 1:1 testing in Barry’s laboratory or on site. A 1:1 testing is often the only way to have precise data to design the rope and netting system and the supporting structure.
- In most regulations in the world, it is mandatory to have a qualified person (professional engineer or other authorized person) to certify the implementation and the system before it can be used.
- Reduction of the cost of design and certification can become in the long run a serious liability and risk for the safety of the system users.

### **Golden Rule # 4: Training is an essential factor in safety**

So many times we have seen customers buy rope and netting systems, and seen individuals cut the corners on training. In some cases, this creates real safety problems and it leads to great costs. Misuse, poor maintenance and inspection of any rope and netting system can result in faster aging and in more costs or replacements, as well as higher risks for the user and personnel that are supposed to be protected by the system.

The instructions manual and our Barry training on complex systems are musts for protecting your investment.

### **Golden Rule # 5: Your safety through inspection**

It is important to inspect your rope and netting systems before and after each use. Manufacturers' instructions usually require that a formal inspection should be performed at least once a year by a competent person (other than the user). The result of this inspection must be recorded in an inspection log which should include the inspection instructions and any other documentation regarding the equipment as well as the engineer's certification. Also make sure that you do the appropriate maintenance of your rope and netting system to prolong its lifetime by following the manufacturer's recommendations.

No system is worth the price of a human life! Never hesitate to retire from service a piece of equipment that you no longer trust.

### **Conclusion**

The lives of our children, friends, fellow workers and clients are important to us and we believe that all users of rope and netting systems should, at the very least, apply the above measures to assure their safety. Unfortunately, we often only realize our shortsightedness after an accident has already occurred. Take the time to ensure that your rigging equipment is adequate and that all system components, including the anchorage and support points, have been seen and certified by an engineer or equivalent authority so that your experience is a safe and positive one!

If you need any technical support, or have any questions or comments, please do not hesitate to contact us.

**Safety always comes first!**

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If you would like more information on this topic, please contact **Marc André Pilon** at the Barry Centre of Excellence – [mapilon@barry.ca](mailto:mapilon@barry.ca)

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