

# UNDERSEA FIBER OPTIC CABLES

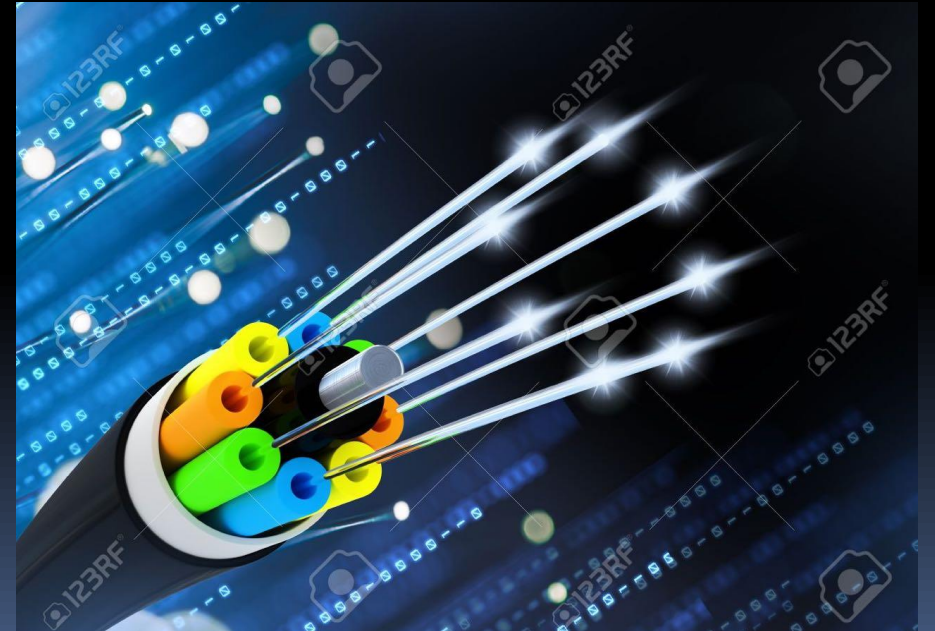


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Eng-17-068

# CONTENT

- ❖ Introduction
- ❖ Optical Amplifier
- ❖ Configuration
- ❖ Powering
- ❖ Issues
- ❖ Conclusion



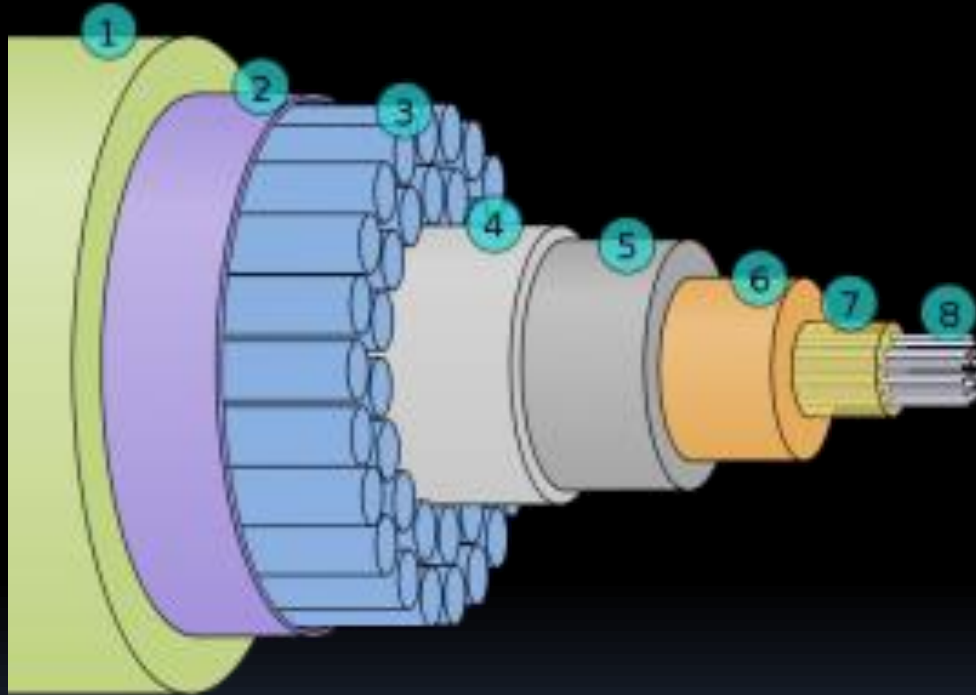
# WHAT IS AN UNDERSEA FIBER OPTIC CABLES..?



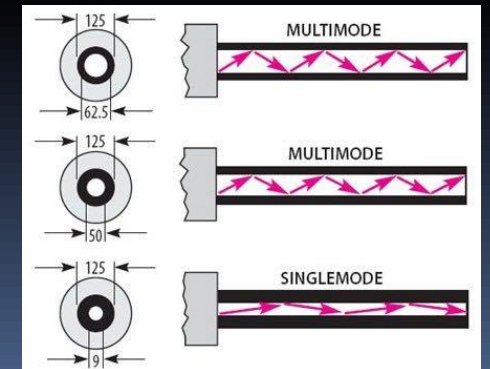
- Carry telecommunication signals across stretches of ocean



# Cross section of undersea fiber optic cable



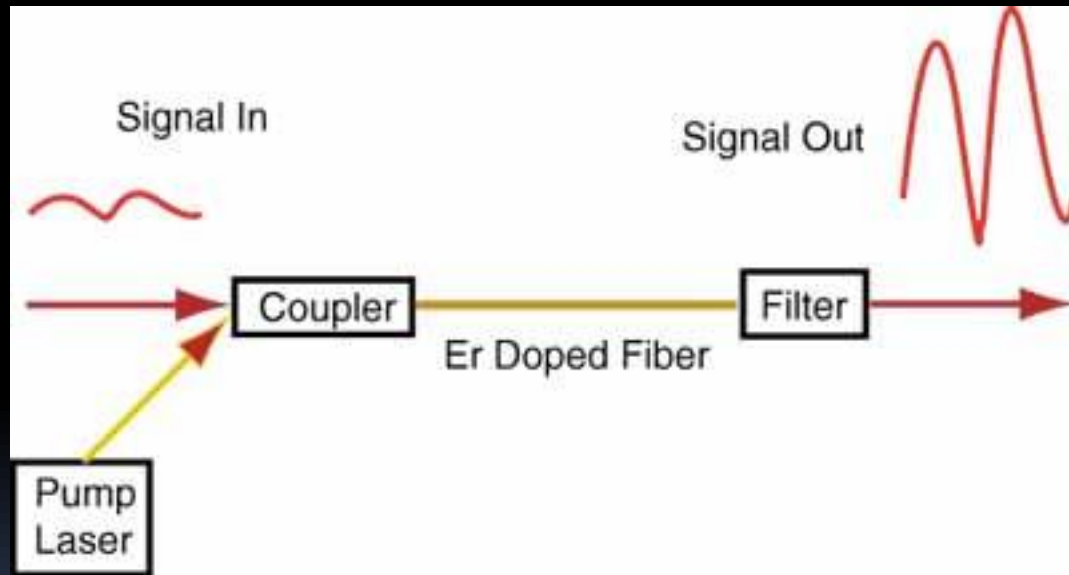
1. Polyethylene
2. "Mylar" tape
3. Stranded metal (steel) wires
4. Aluminum water barrier
5. Polycarbonate
6. Copper or aluminum tube
7. Petroleum jelly
8. Optical fibers



# UNDERSEA FIBER OPTIC CABLE

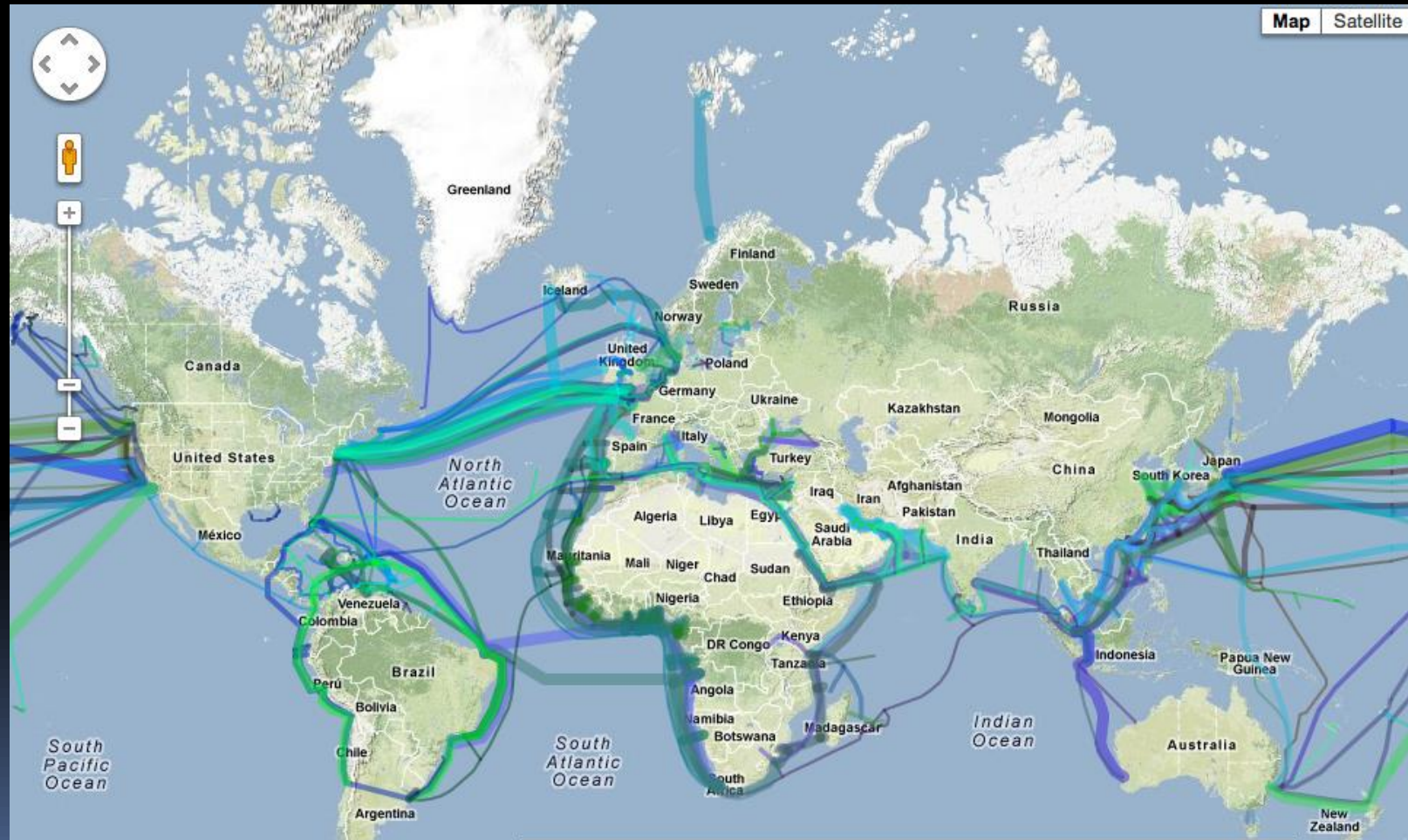


# OPTICAL AMPLIFIER



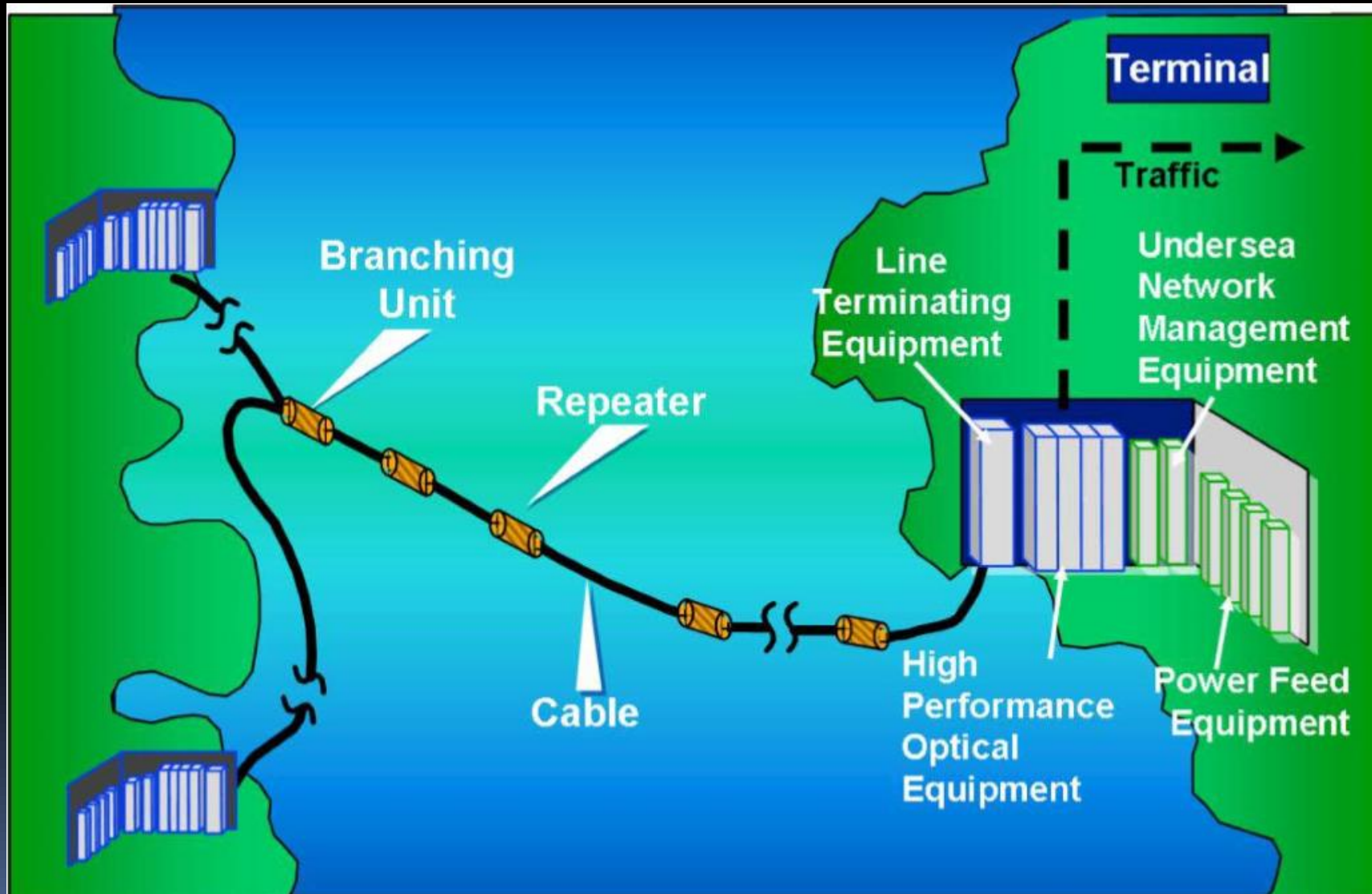
- Optical amplifiers increase the intensity of a signal
- There are different types, for different spectrums of light.
- The most common is the Erbium Doped Fiber Amplifier.

# UNDERSEA CABLE MAP



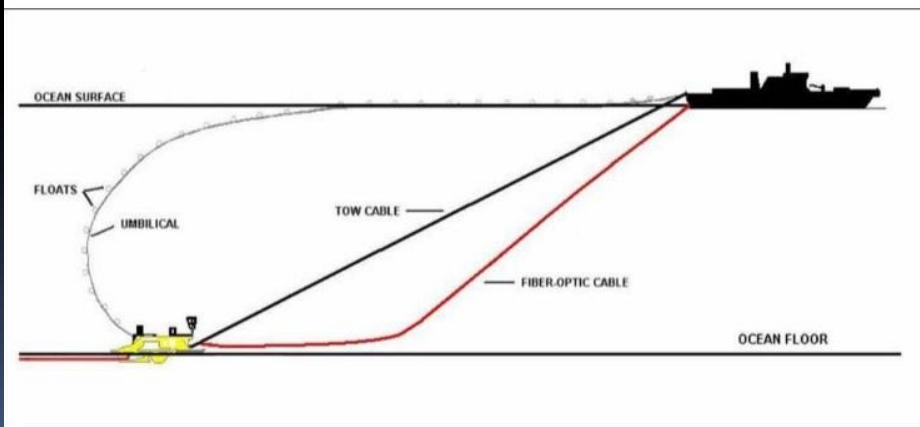


# Configurations of undersea fiber optic cables





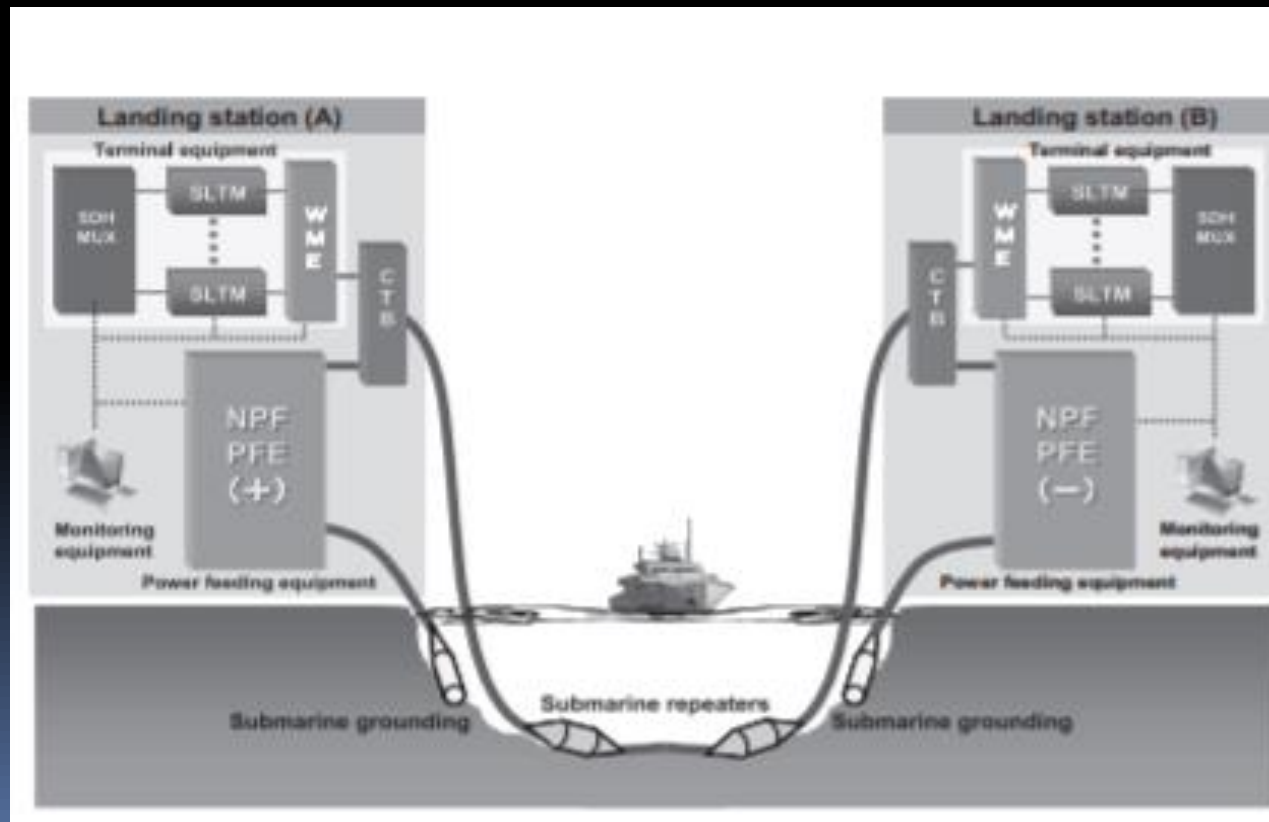
# Installation of Undersea Fiber Optic Cable



- Cable burial remains the most effective and economical method of protection
- Towed cable plows remain the industry standard for cable burial (1 to 3m typical)

# POWERING UNDERSEA FIBER OPTICS

- A submarine cable system is fed power from power feeding equipment that supplies constant current.

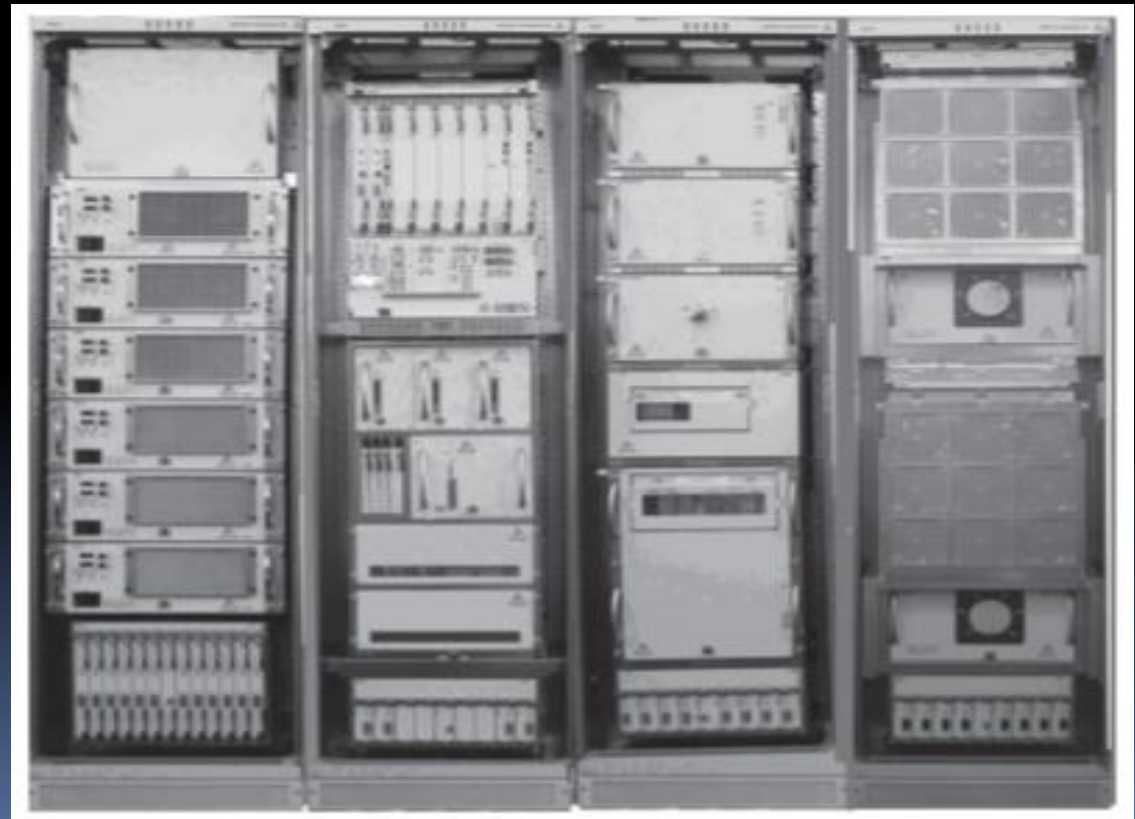


## ➤ Outline of Power Feeding Equipment

- Power Feeding Equipment Configuration
- Reliability

## ➤ Power Feeding Equipment Specifications

- Reduced Size and Higher Output Power
- Remote Monitoring/Control





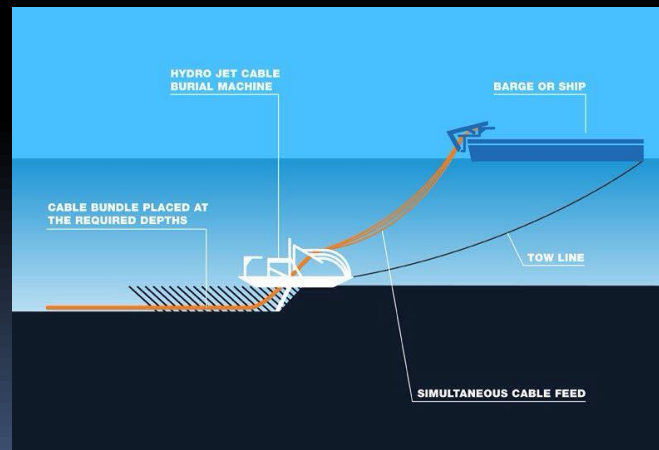
# ISSUES

- Environmental Impact
- Fault in Submarine cables





# CABLE REPAIR








# CONCLUSION..

This concludes our study of Fiber optic cables. We have looked at how they are made and how they are work. We have examined the properties of fibers, and how fibers are joined together. Although this presentation does not cover all aspects of optical fiber work it will have equipped you knowledge and skills essential to the fiber optic industry.



Q & A

