Protecting the Star Spangled Banner

A Case Study in Oxygen Reduction Systems
Protecting the Star Spangled Banner

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Please attend Jim Call’s Presentation at the 2018 SUPDET Convention
Raleigh NC,
9 AM Friday September 14, 2018
Agenda

• Museums' Role in Society
• Star Spangled Banner
• Protection of the Star Spangled Banner
  • Historical
  • 1st Generation Oxygen Reduction System
  • 2nd Generation Oxygen Reduction System
• Innovation and Technology issues
• Q&A
• Conclusion
Museums' Role
Museums' Role
Museums' Role
Museums' Role
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Museums' Role
Museums' Role
US Artifacts
US Artifacts
US Artifacts
US Artifacts
US Artifacts
US Artifacts
Star Spangled Banner History
Star Spangled Banner History
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[Image of the Star Spangled Banner in a museum setting]
Star Spangled Banner History
Protecting the Flag
Protecting the Flag
Protecting the Flag
Protecting the Flag
Oxygen Reduction System #1
Oxygen Reduction System #1
Oxygen Reduction System #1 Problems
Oxygen Reduction System #1½
Oxygen Reduction System #2

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Oxygen Reduction System #2
Lessons Learned

• Chamber Integrity
• Listing Issues
• Technological Development
• Patent Issues
• Spare Parts
Lessons Learned

New Technology gives up Reliability.
- Wayne Moore
Lessons Learned – Room Integrity
Lessons Learned – Listing Issues
Lessons Learned – Tech Development

![Graph showing stages of technology development]

- **On the Rise**: R&D, startup companies, first round of venture capital funding.
- **At the Peak**: First-generation products, high price, lots of customization needed, supplier proliferation, hype begins, early adopters investigate.
- **Sliding Into the Trough**: Negative press begins, supplier consolidation and failures, second/third rounds of venture capital funding.
- **Climbing the Slope**: Less than 5 percent of the potential audience has adopted fully, second-generation products, some services.
- **Entering the Plateau**: High-growth adoption phase starts: 20% to 30% of the potential audience has adopted the innovation, third-generation products, out of the box, product suites.

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Lessons Learned – Patents
Protecting the Star Spangled Banner

Questions and Answers
Fire Protection’s Continuing Role
Fire Protection’s Continuing Role
Protecting the Star Spangled Banner

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