World Demand Trends Summary

International Titanium Association
Annual Conference
September 13 – 16, 2009
2009 Military Demand Flat From 2008

- F-22 future build increases cancelled; C-17 program coming to an end in 2010
  - Existing orders to be completed
- Refueling tanker facing continued delays
- F-35 behind schedule
- Legacy programs such as F-15, F-18 continue production, primarily for export sales
- Spares important demand component
  - Large installed fleet
Where Are We Now?

2009 Jet Engine Demand Down 30% From 2008

• 787, A380 delays
• Spares reductions due to lower aircraft utilization
  – Global RPM’s Down 10% from 2008
  – Important component of engine demand
• Regional jet production down 20%
• Legacy build rates holding on – barely
  – 777 down to 5 per month from 7
  – A320 down to 34 per month from 36 – was slated to reach 40
  – Significant deferral activity
• Supply chain destocking
2009 Airframe Demand Flat to Down From 2008

• Market drivers all negative
  – Traffic, capacity, profitability, fuel costs
• New airplanes still popular, as backlog indicates
  – Legacy build rates projected at a slight increase
• New program delays impacting industry
• Not addressed: inventory issues related to supply chain destocking
• Real problem is lack of anticipated increase from new programs
Where Are We Now?

2009 Industrial Demand Down 20% From 2008

• Consumer driven markets 57% of segment demand
  – Hit hardest with 23% decrease, as consumer spending has been devastated by this recession

• Infrastructure driven markets 43% of segment demand
  – Demand down 18% in this segment
  – Projects delayed in Power Generation, Desal
  – Lower energy prices slowing spending on LNG, Oil and Gas
Where Are We Going?

2009 Looks to be Weakest Year; Expect Growth in All Segments from Here

• Jet engine growth expected at an average CAGR of 16% through 2014
  – Demand surpasses 2008 level in 2011
• Commercial airframe demand recovers and increases from 2008 levels with new program growth, particularly 787
• Industrial market recovers, but shipments remain below 2008 until after 2012
• Military demand flat through 2011, then grows an average of 6% per year through 2015
  – F-35 most important program for growth
Key Elements to a Recovery

• World GDP growth resumes
  – Critical underlying element for both industrial and commercial aerospace markets
  – Drives demand for products, creates prosperity necessary for the investment in new capacity

• New aircraft programs are successful
  – 787 is the one everyone is focused on
  – Continued increases in A380 build rates important
  – F-35 development to meet cost and performance targets necessary for success; otherwise early termination like the F-22 is it’s likely fate