

INVESTMENT CASTING MARKET OVERVIEW NORTH AMERICA

12th World Conference
on Investment Casting
Dallas, Texas
October 19-22, 2008

Doug Kovatch
President
Kovatch Castings, Inc.



- **Approx. 40% of worldwide investment casting production**
- **144 Companies**
- **178 Foundries (not including dental, art or jewelry)**
- **34 US States plus Canada & Mexico**
- **Foundry Distribution 30% Aerospace & IGT
70% Automotive & General Industry**
- **30,000+ Employees**
- **Approx. 75% Capacity Overall**



■ North American Investment Casting Industry

- Overall strong – 4th year of Growth across Most Markets
- Record Levels of Production in Aerospace & IGT
- Raw Material Cost Increases
- Energy Costs at Historic Level
- Effect of Housing Market & Slowing U.S. Economy
- Offshore Sourcing

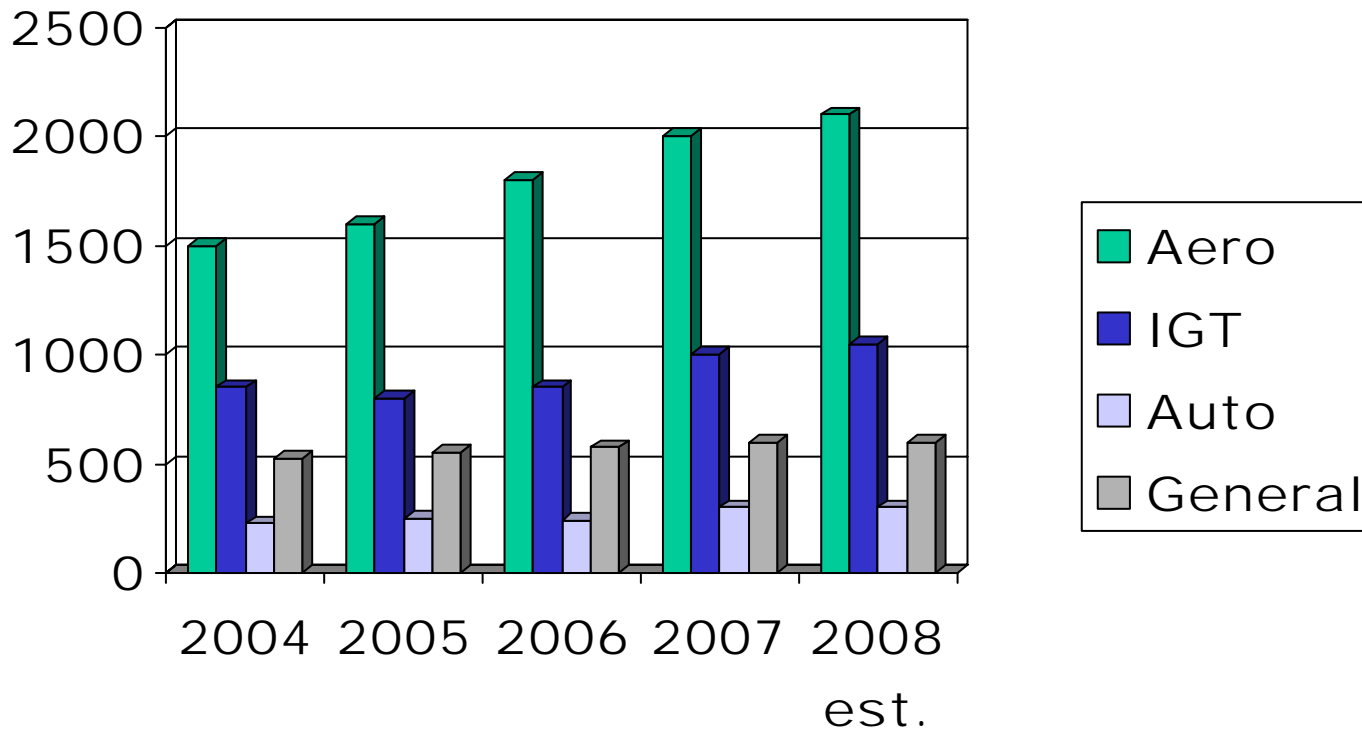


▪ Segment summary

- **Aerospace – Commercial – Driven by New Builds & Spares**
Military – DOD Requirements for Aircraft Engine Spares
- **Industrial Gas Turbines (IGT) – Increasing Demand in all classes of Gas Turbines**
- **Automotive – Negative Impact of Higher Fuel Prices & Production Slowdown**
Turbocharger Applications still Growing
Shift to Smaller Fuel Efficient Vehicles
- **General Industry – Active in Petrochemical Equipment, Food Processing, Railroad Equipment & Commercial Building**
Medical Device Applications continue to Grow

Market Segment Sales Trends

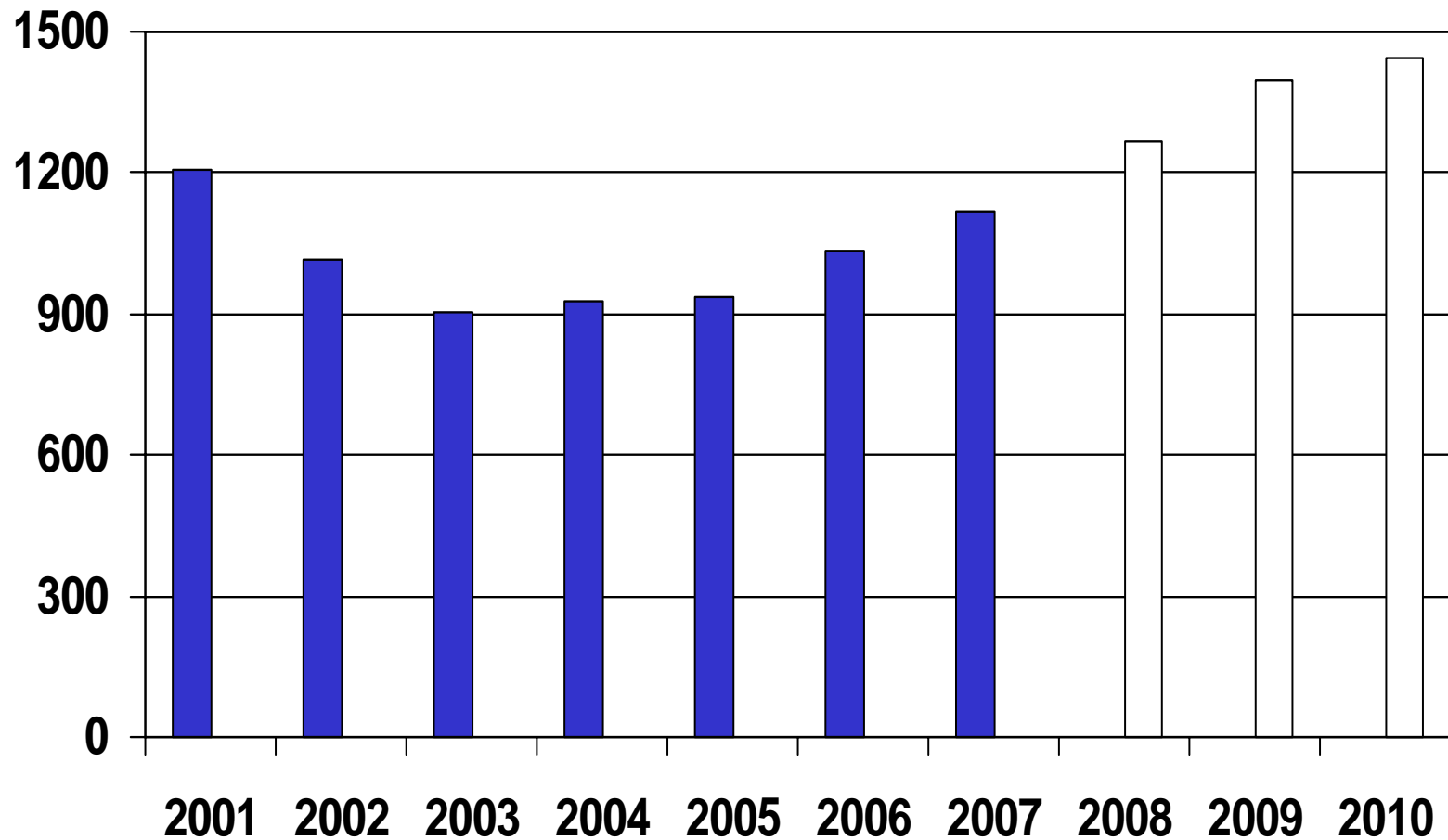
(\$ Million - USD)



Source – ICI Data & Estimates



Commercial Aircraft Deliveries 50 Passengers +



Source: ROM Associates 2-08

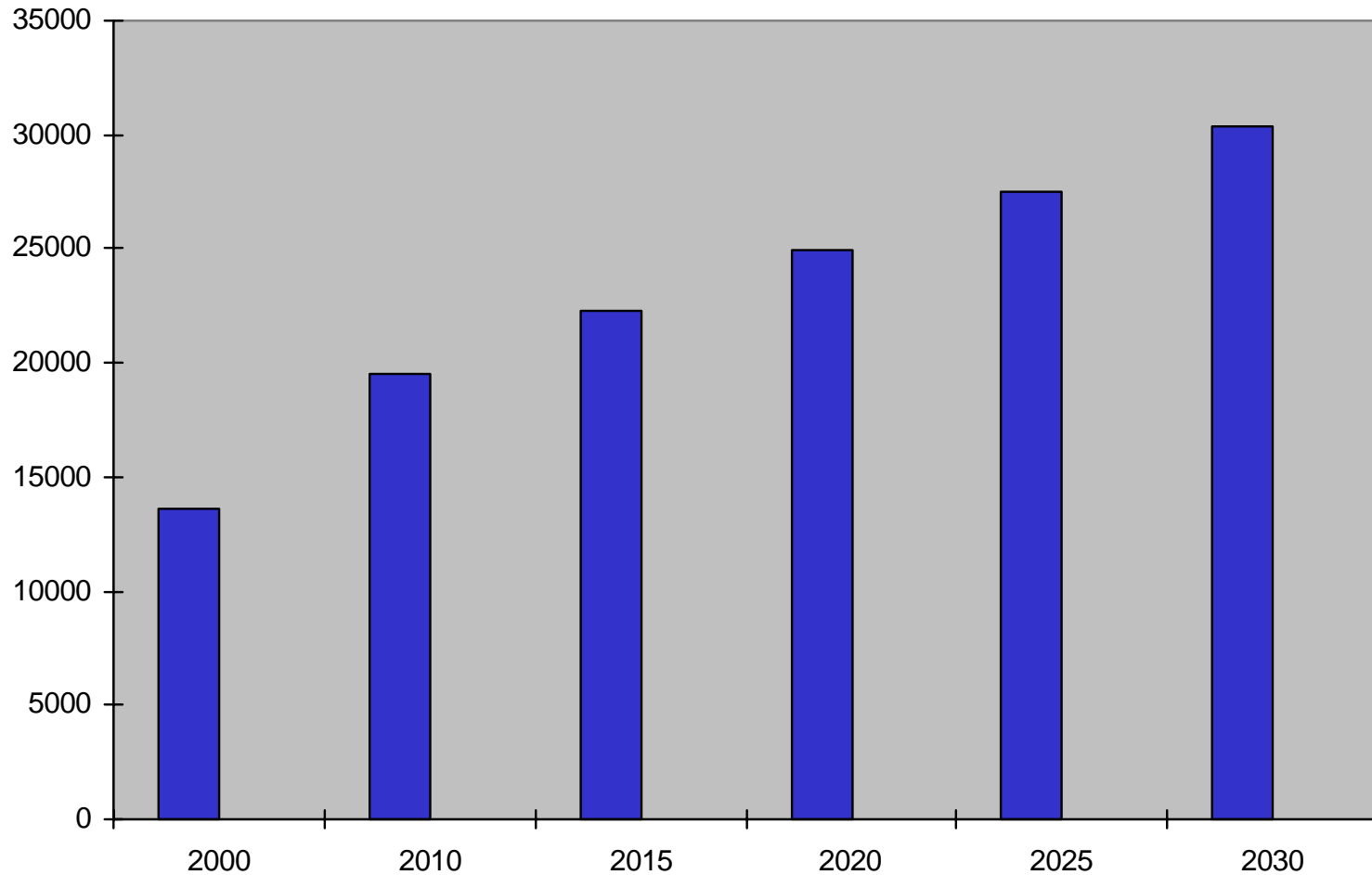
Industrial Gas Turbines



- **Electrical Power Generation**
- **Standby Power**
- **Emergency Generator**
- **Oil & Gas Platform**



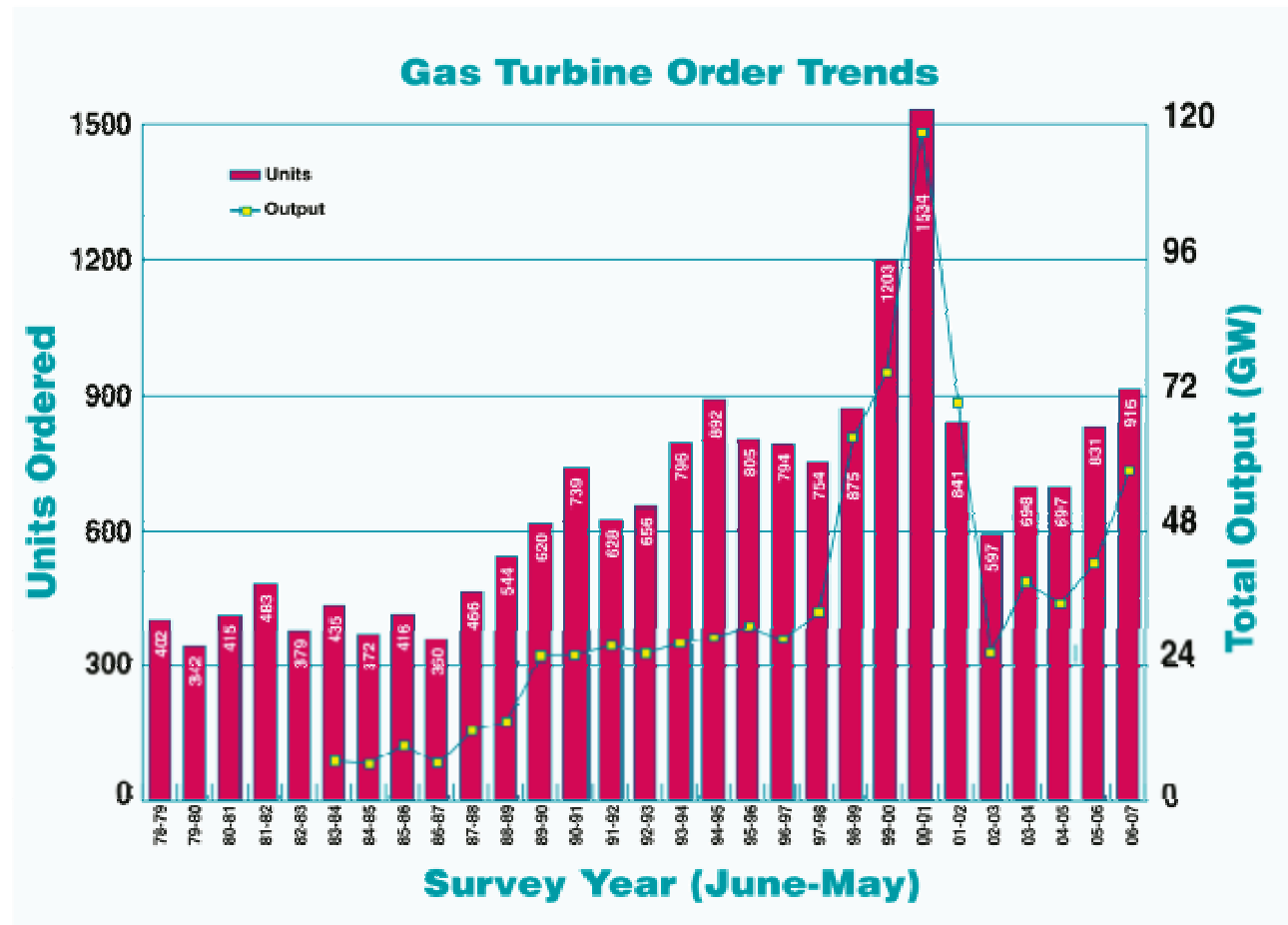
World Electricity Demand - Billion Kilowatt-hours



Source: Energy Information Administration (EIA)



POWER GENERATION ORDER SURVEY



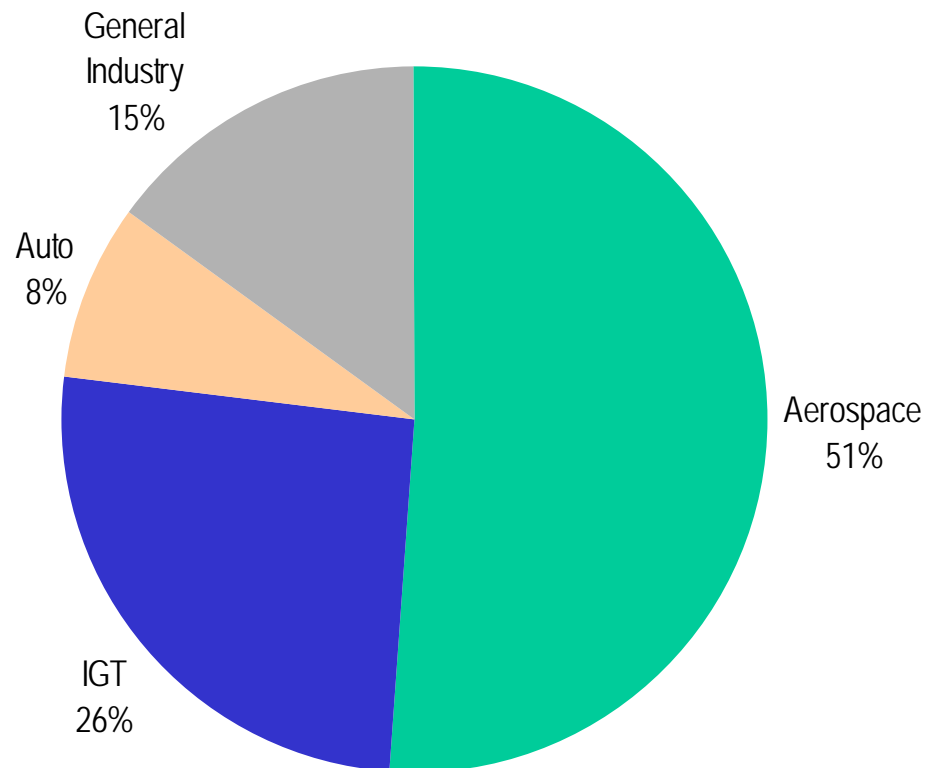
Source: Diesel and Gas Turbines Worldwide

North American Investment Casting 2007 Sales (\$ Billion - USD)



Aerospace	2.000
IGT	1.000
Automotive	.300
General Industry	.600

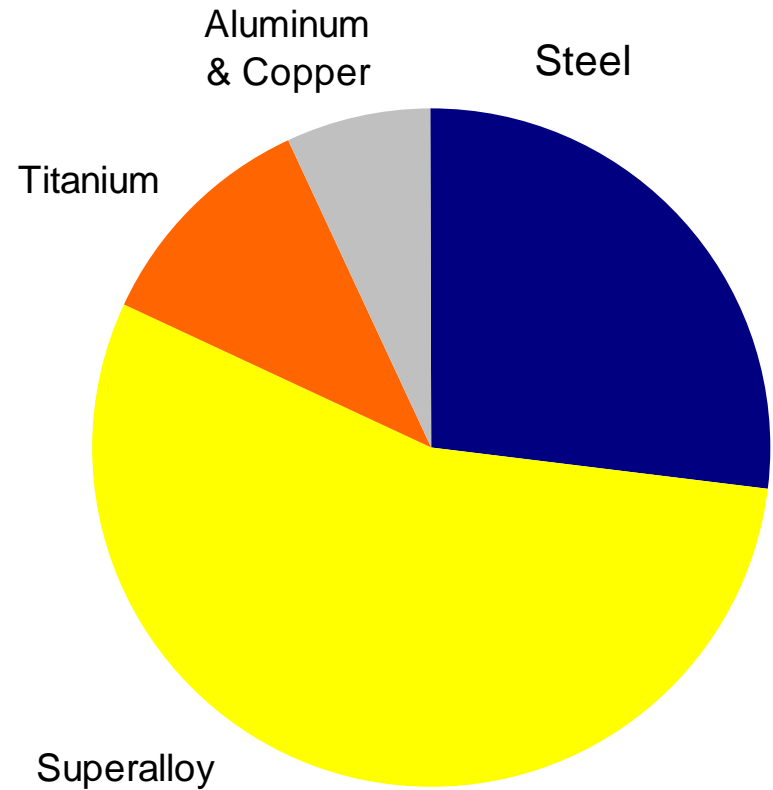
TOTAL: 3.900



North American Investment Casting Market by Alloy Type



Aluminum & Copper:	7%
Titanium:	11%
Steel:	27%
Superalloy:	55%



**2007 Casting Dollars
\$3.9 Billion**

North American Investment Casting 2008 Estimated Sales (\$ Billion - USD)



		<u>% Change</u>
Aerospace	2.100	5-8
IGT	1.050	5-8
Automotive	.300	-
General Industry	.600	-
TOTAL:		4.050



- **North American IC Industry at High Level of Activity**
- **Commercial Aerospace & IGT should continue to grow**
- **Military Aerospace appears to be softening in near term**
- **Automotive & General Industry – busy in specific areas**
- **Raw Material Cost & Availability are a concern**
- **Historically High Energy Costs**
- **Need to focus on market Niches & Supplying Value Added Features / Services and Performance**
- **Caution: Effect of a slowing U.S. Economy and weak USD**