

## Japanese aerospace companies target the Mexican market June 2012

A group of Japanese aerospace company representatives traveled to Mexico in May to learn about the country's aerospace manufacturing footprint and engineering prowess in the development of the industry. The group visited aerospace clusters in the cities of Queretaro, Chihuahua, Mexicali and Tijuana, which together concentrate more than half of the country's aerospace manufacturing.

Mexico has decades-long experience as a supplier of aerospace products to OEM's in North America and Europe. Moreover, Mexico is now the 9<sup>th</sup> largest supplier of aerospace products to the U.S. market, above suppliers such as China, Singapore, Taiwan and South Korea. In 2011, Mexico exported globally US\$ 3.6 billion in aerospace products.



Takashi Kobayashi's S,JAC mission leader with the Governor of Chihuahua State, Cesar Duarte on May 9th

Mexico's aerospace sector is composed of close to 300 firms, of which more than two-thirds are engaged in Manufacturing (MNF), and the rest in Maintenance Repair and Overhauling (MRO), and in Design and Engineering (D&E).

Mexico's traits in the industry could be summarized as:

- Parts and components are certified with international standards and protocols, including BASA
- Proven track record of meeting schedules and tight manufacturing orders
- Ability to meet quality requirements and cost objectives
- Strengthened capacity to protect Intellectual Property
- Large pool of qualified workers and engineers.

### Japan's manufacturing must adapt to the strong yen and high energy costs

The aerospace industry in Japan is adapting to fewer manufacturing orders, particularly in defense contracts. In addition, companies experience the impact of the high value of the yen and high electricity tariffs, prompting them to target new markets for their products.

In the highly competitive commercial segment of the industry, Mexico is one of the sought after markets firms are targeting for expansion of their sales and for outsourcing of components. Nabtesco, Mitsubishi Heavy Industries (MHI), ShinMaywa Industries, Sumitomo Precision Products, and Hitachi Metals, are among scores of companies

Mexico's exports to Japan of machinery and Transport equipment reached US\$1.8 billion in 2011		
EXAMPLES OF ITEMS EXPORTED	Volume	Amount US\$ Million
(70101) POWER GENERATION MACHINES		86.2
(7010105 AIRCRAFT ENGINES)	65.7 ton	36.6
(7010701 MACHINE TOOLS)		0.05
(70121 PUMP AND CENTRIFUGES)		55.5
(70125 POWERED-TOOLS N.E.S.)	4.9 ton	0.17
(70127 COCKS, VALVES AND PARTS)	55 ton	20.5
(7030303 SWITCHES, RELAYS, FUSES ETC.)	185 ton	21.8
(70304 INSULATED WIRE AND CABLE)	23.7 ton	16.3
(70311 SEMICONDUCTORS ETC)		44.4
(70313) ELECTRICAL MEASURING		77.9
(811 PRECISION INSTRUMENTS)		340.6
(81101 SCIENTIFIC, OPTICAL INST)		339.7

Source: Ministry of Finance of Japan

looking at opportunities in Mexico.

Such companies are exploring manufacturing complementarities, for example in fabrication of wire harnesses, flight control actuators, interior panels, electrical power distribution systems, and landing gear parts, as well as in forging and casting of mechanical parts.

Mexico is also a growing passenger airline market. With a population of 114 million, and an expanding middle class, the country is the target of discount airlines luring young and cost conscience travelers. Aircraft maker MHI has an interest in placing orders of its two regional jet models with Mexican airlines when such aircraft will be commercially available after 2015.



The visit to Mexico impressed Japanese executives who realized the ample pool of engineering talent and the expanding number of Mexican graduates in aerospace field specializations. For example, local engineers are developing the software for Numerical Control Machines and other sophisticated programmed automation systems for the operation of machines and tools, including drafting, assembly, inspection, sheet metal working, and various metal machining processes like turning, drilling, riveting and shaping that result in the manufacture of large pieces, including aircraft fuselages, and

empennage structures.

Those aircraft structures are shipped from Mexico to their final assembly in Wichita, Kansas (two days time delivery) or to Montreal, Canada (three days time delivery) by land transportation. The latter, puts Mexico in a unique position in terms of logistics, cost savings, and delivery times that could not be matched if that manufacturing process originates in Asia.

**Mexico-Japan EPA grants preferential market access to aerospace parts and components traded between the two countries**

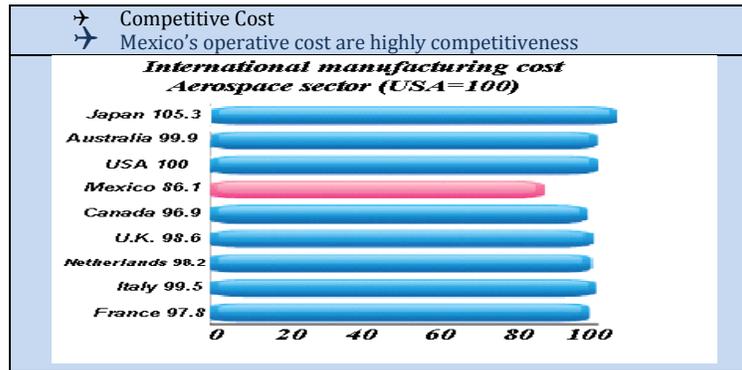
The export of aerospace components from Mexico to clients in North America and Europe, and other markets including Japan, enjoy preferential access to those markets thanks to free trade agreements of which Mexico is part of, including the NAFTA.

Production of parts and systems in Mexico are backed by certifications and recognition of standards by international protocols. One of such certifications is the Bilateral Aviation Safety Agreement or BASA, to which Mexico subscribed with the U.S. Federal Aviation Administration in 2007. BASA certifies the quality of production of parts in Mexico to be exported to the United States and other countries.

The Aircraft Industry in Mexico at a glance OEM's suppliers by aircraft model in Mexico				
Manufacturer	Model	# of suppliers globally	# of suppliers in Mexico*	Percentage
Airbus	330-300	355	16	4.5
Airbus	A380	399	20	5.0
Boeing	787	299	14	4.7
Boeing	747-400	354	12	3.4
Bombardier	CRJ200	299	13	4.3
Embraer	ERJ 135	279	17	6.1

\* Identified suppliers not necessarily supply parts for the mentioned models  
Source: S.E.and AROSPACE DATABASE, PROGRAM TRACKER

More recently, Mexico also subscribed to the Wassenaar arrangement making the country even more attractive to investment, particularly by companies supplying clients in the defense sector. Such sector is almost four times bigger, in terms of value and also for new aircraft and equipment orders, than the commercial sector.



Source: KPMG's "Competitive Alternatives 2010" research

### Mission follow-up

For the time being, the interest of the Japanese aerospace sector in Mexico is focused on evaluating the market, as well as in obtaining the necessary validation of several MNF subcontractors capable of special processes. Firms are also identifying supply chains networks in Mexico that will match production complementarities, both in Japan and in the United States to supply clients including, Boeing, Bombardier, Airbus and Mitsubishi Heavy Industries.

The mission to Mexico took place from May 6<sup>th</sup> to 11<sup>th</sup>. It was supported by the Society of Japanese Aerospace Companies (SJAC), the Mexican Federation of Aerospace Industries (FEMIA), the state governments of Queretaro, Chihuahua and Baja California, and by the Embassy of Mexico in Japan, offices of the Ministry of Economy and ProMexico.

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