Challenges & Potentials of Surgical Instrument Manufacturing Industry

Sialkot
Historical Perspectives of Surgical Industry

From historical viewpoint manufacturing of surgical instrument started at the turn of the 19th century when the doctors of American Mission Hospital Sialkot had given some Scalpels and other used instruments to the artisan of community of black smiths who had the skill of making swords and knives, so the hands which were making lethal items started to make life saving instruments.

To institutionalize the local expertise of surgical instruments and provide common facilities to the manufactures, the British Government established the metal industry development centre (MIDC) in 1941. This centre helped the industry to shift basic metal products to precision surgical instrument manufacturing.

In 1958 the Surgical Instrument Manufacturing Association of Pakistan was incorporated which safe guarded the interests of the industry. The Surgical Association since than is regularly playing a central roll in addressing issues at the Government level, nominating trade delegations and participants for trade fairs and exhibitions, handling inter-industry issues and representing the industry at various local and international forums.

Surgical association has 3000 members firms and about 500000 peoples directly or indirectly are getting benefits from this industry. From the surgical industry we are earning about 225 million U$ dollar (this is according to the report of the financial year 2009 -2010).

In Sialkot over Five thousand different medical instruments, covering all section of surgery such as electro medical instruments micro surgery instruments, Cardiovascular, endoscope, Gynecological, ENT, Respiratory AID Orthopedic instruments, Hollowware,
Anesthesia Products, Hospital Furniture, Dental Instruments, Veterinary Instruments, Beauty Care and Beauty Saloon Instruments are produced and exported all over the world.

In 1994 the industry has to face a ban on imports of surgical instruments from Pakistan by US authority Food and Drug Administration (FDA). This ban forced the industry to improve its manufacturing and management systems. Now with the result of this ban every industry has acquire ISO Certification, secondly, a material testing laboratory was established in joint collaboration with TDAP where material is tested according to international standard.

Improving the perception and market value of all types of instruments being Manufactured in Pakistan should be on top of our agenda. If you analyze the export figures, the volume of instruments has consistently gone up but value wise it has come down.

Further, we must also note that the US Dollar has become stronger by over 30% in last 4 years and so actually our instruments have depreciated in value. We may be getting more Rupees, but definitely lower in Dollar terms. This is not a good sign.

We must change the cheap perception of our products and also learn to stop competing ruthlessly among ourselves. This type of attitude will not help to build an industry. We must have a long term plan, which includes all stake holders, both government and private sector, to plan to completely overhaul the whole industry in the next 5 years. This will not only bring ample jobs to Sialkot and the vicinity, it will greatly enhance our exports.

I suggest, make a team of 10 to 15 major stake holders and come up with an 'out of the box' plan that will totally change the face of this industry.
Production Flow Chart

- MATERIAL PROCUREMENT
- MATERIAL INSPECTION
- STORE
- CUTTING
- BLANKING
- FORGING
- ANNEALING STRESS RELIEVING
- TRIMMING
- RING PUNCHING
- COLD STAMPING
- ANNEALING
- SHOT BLASTING
- MILLING OF MALE FEMALE RATCHETS
- FILING
- HEAT TREATMENT
- HARDNESS TESTING
- PICKLING
- MALE GRINDING
- SAND BLASTING
- FIXING
- POLISHING
- ELECTRO POLISHING PASSIVATION
- BUFFING
- ULTRA SONIC CLEANING
- CHECKING
- FINAL BUFFING ULTRASONIC CLEANING
- STAMPING
- PACKING

Strategy Working Group – Surgical Instruments and Medical Devices Sector
Product Profile

- Disposable Instruments: 19%
- Re-usable Instruments: 1%
- Advanced Devices: 80%

Strategy Working Group – Surgical Instruments and Medical Devices Sector
# Market (Country wise Analysis) 2009

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Import</th>
<th>Pakistan Share</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>U.S.A</td>
<td>US$: 26 Billion</td>
<td>US$: 126 Million</td>
<td>0.5%</td>
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<tr>
<td>Germany</td>
<td>US$: 12 Billion</td>
<td>US$: 67 Million</td>
<td>0.5%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>US$: 07 Billion</td>
<td>US$: 48 Million</td>
<td>0.7%</td>
</tr>
<tr>
<td>France</td>
<td>US$: 07 Billion</td>
<td>US$: 23 Million</td>
<td>0.3%</td>
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<tr>
<td>Italy</td>
<td>US$: 06 Billion</td>
<td>US$: 16 Million</td>
<td>0.3%</td>
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<tr>
<td>Brazil</td>
<td>US$: 02 Billion</td>
<td>US$: 10 Million</td>
<td>0.4%</td>
</tr>
<tr>
<td>U.A.E</td>
<td>US$: 344 Million</td>
<td>US$: 04 Million</td>
<td>1.04%</td>
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<tr>
<td>Japan</td>
<td>US$: 08 Billion</td>
<td>US$: 08 Million</td>
<td>0.1%</td>
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<tr>
<td>Australia</td>
<td>US$: 03 Billion</td>
<td>US$: 08 Million</td>
<td>0.2%</td>
</tr>
<tr>
<td>Mexico</td>
<td>US$: 05 Billion</td>
<td>US$: 32 Million</td>
<td>0.7%</td>
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<td>Overview</td>
<td>SWOT</td>
<td>Recommendations</td>
<td>Targets</td>
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### Strengths

- 3rd Generation Industry
- Well known in global markets
- Wide range of products
- Customize production systems
- Surgical Industry producing life saving instruments
### Weaknesses

- Absence of regulatory framework
- Lack of contact with end user
- Negative global perception
- Inconsistent product quality
- Focus on low-tech, low quality, low value products
- Absence of work force for emerging technologies
- Unavailability of quality raw materials
- Absence of R&D
- Lack of linkages with academia
- Lack of distribution network
- Insufficient Quality Control
- Lack of Brand
Opportunities

- US$ 100 billion, rapidly evolving market
- Demand of high tech products from existing customers
- Rising demands in African and Asian markets
## Threats

- Emerging technologies replacing conventional ones
- Upcoming global competitors (India, Malaysia, Hungary, Poland, China)
- Market becoming highly regulated
- Drainage of skilled work force
- Possible import embargos due to:
  - Unregulated business environment
  - Infringement of IPR
- Loosing market share due to inconsistent quality
Recommendations

- Common Facility Center
- Display Center
- Up gradation of SIMTEL
- Frequent subsidized Trade Delegations
- Sialkot should be declared as EPZ
- Government is very slow in returning duty draw backs and sales tax refunds. The process for refunding should be accelerated.
## Targets

- Exports of US $ 500 M by year 2015
- To switch towards Hi Tech Products
- 5,000 highly skilled workers
- Product diversification due to close collaboration with end user
- Joint ventures with market leaders
- Growth of associated industries
- Increased social responsibility by industry
THANK YOU