

Services Portfolio



ASTIN
National Center of Technical
Assistance to Industry

Mission

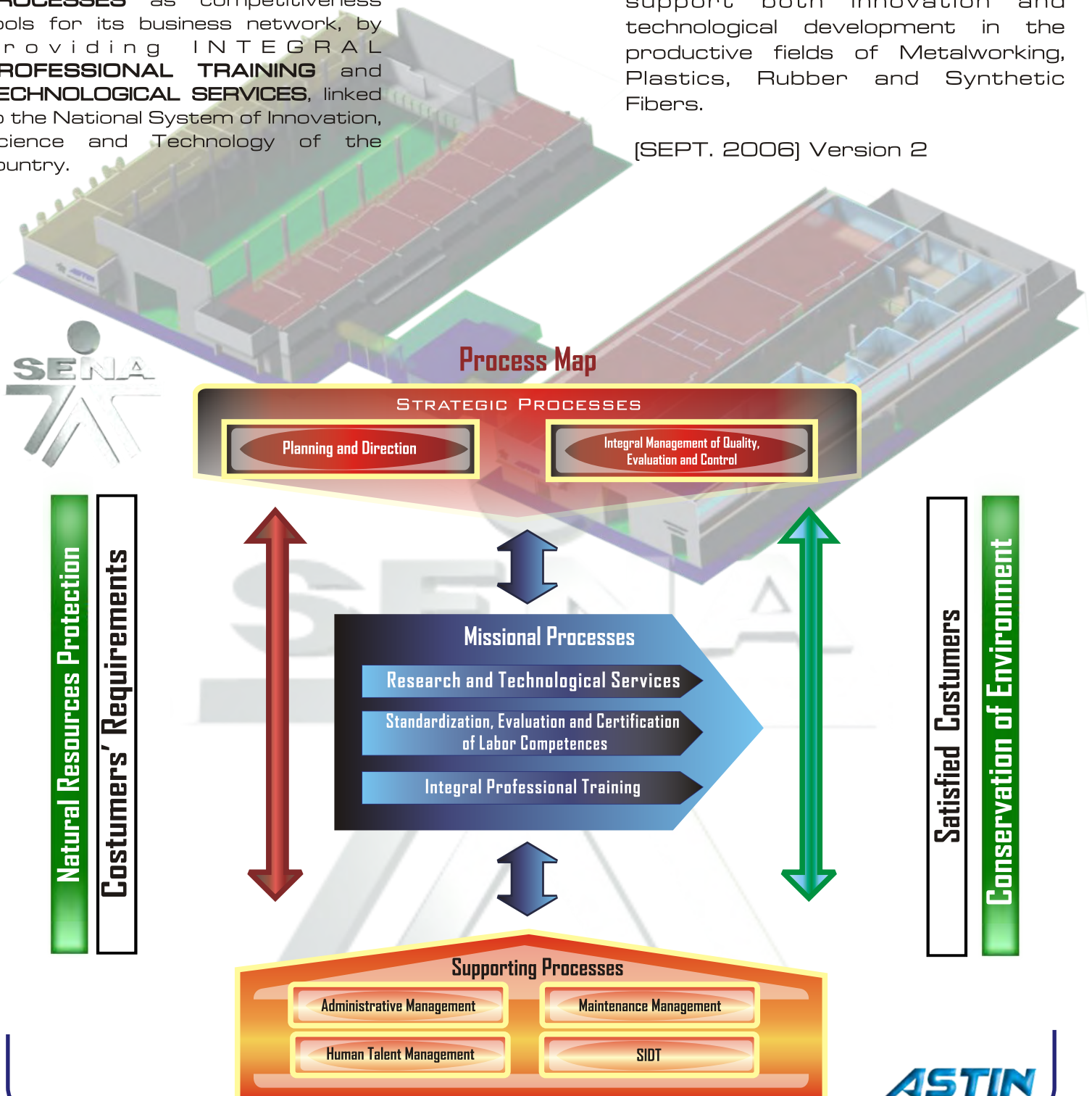
National Center of Technological
Technical Assistance to Industry
[ASTIN]

To actively contribute to economical and social development of Colombia by supporting, enhancing and developing the usage of technologies **IN DESIGNING, MATERIALS AND THEIR TRANSFORMATION PROCESSES** as competitiveness tools for its business network, by providing **INTEGRAL PROFESSIONAL TRAINING** and **TECHNOLOGICAL SERVICES**, linked to the National System of Innovation, Science and Technology of the country.

Vision

In the coming five [5] years, ASTIN will become the Technological Development Center leader in Colombia and one of the best in Latin America in designing and developing: products, tools, new materials and manufacturing processes to bring up to date professional training and support both innovation and technological development in the productive fields of Metalworking, Plastics, Rubber and Synthetic Fibers.

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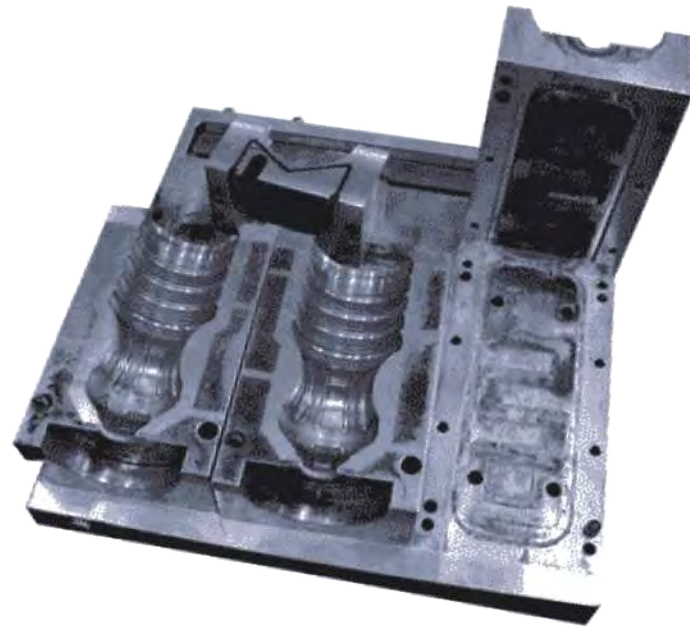


Quality Policy Statement

In order to contribute to the accomplishment of essential goals of the country, defined in its Constitution, ASTIN is committed to:

- Execute Integral Vocational Training
- Standardize, Evaluate and Certify worker Competitiveness
- Research and provide Technological Services

In a timely, reliable and effective way; with human talent qualified and committed, with the help of innovative methodologies and open and flexible learning spaces leading to meet customers' requirements while contributing to the continuous improvement of its processes.



Quality Objectives

To implement, maintain and improve the Quality Management System, and based in our Quality Policy, the following quality objectives have been set at ASTIN:

- To guarantee timely attention and response to customers' requirements.
- To satisfy customers through the accomplishment of products and services' requirements.
- To demonstrate the effectiveness in the performance of processes.
- To implement and maintain the Quality Management System.



**SENA: KNOWLEDGE
AND COMPETITIVENESS
FOR ALL COLOMBIANS**





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RESEARCH AND TECHNOLOGICAL SERVICES

TECHNICAL ASSISTANCE

Process that contributes effectively to the optimization of products and processes in companies or associations.

- Design and Development of Products.
- Design of Productive Systems.
- Improvement and optimization of productive processes for companies in the subsections of plastic, rubber and metalworking.
- Failure Analysis in processes or products.
- Selection, tuning and start up of machines and equipment for plastic transformation processes.
- Diagnosis of problems and identification of technological requirements in production systems.
- Implementation and management of test and calibration laboratories.
- Quality Management and Control.
- Technological Surveillance and Competitive Intelligence



LABORATORY TRIALS AND TESTS

ASTIN laboratories support companies in their Quality Control and Assurance Plans while offering the following services:

- Metallography and Spectrometry
- Metrology – Industrial Measurements
- Metrology and Calibration
- Mechanical tests
- Chemical Tests
- Physical Tests
- Hard coatings



ACCREDITED CALIBRATION AND TESTING LABORATORIES
UNDER ISO / IEC 17025: 2005



Industria y Comercio
SUPERINTENDENCIA
REPUBLICA DE COLOMBIA
Ministerio de Comercio - Industria y Turismo





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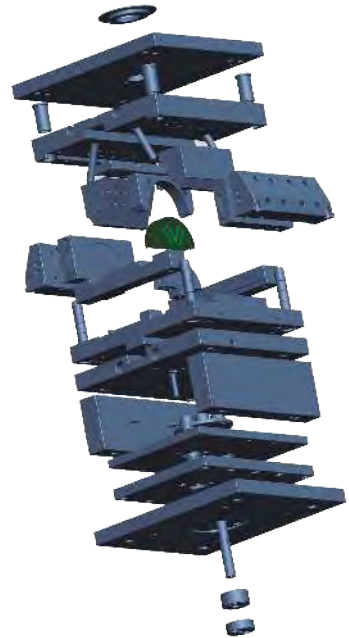
RESEARCH AND TECHNOLOGICAL SERVICES

SPECIAL MANUFACTURING

It refers to the manufacture of pieces with well-defined geometrical configuration and a high degree of difficulty.

DIE STAMPING WORKSHOP

- Cylindrical Grinding
- Plane and Profile Grinding
- Tool Sharpening
- Conventional Turning and Milling
- Lathe and Machining Center C.N.C
- Electroerosion by penetration and cutting wire
- Thermal treatments
- Special welding
- Epoxy Resins



POLYMERS TRANSFORMATION

PLASTIC TRANSFORMATION PLANT

- Injection Molding of Plastic Materials
- Blow Molding of Containers
- Extrusion Molding of Pipes and Profiles
- Blown Film Extrusion

RESEARCH AND TECHNOLOGICAL DEVELOPMENT (R&D)

Through (R & D) knowledge is assimilated, adapted and appropriated by the implementation of applied research projects, design, development of products and processes that are subsequently transferred to industry, focusing in the structuring of competitive capabilities of our clients and ASTIN itself.

Some of our technological Services offered are:

- Project Formulation
- Techniques and Tools for the Design and Development of Plastic Products
- Methodological Applications for Designing and Developing Products in Metal Sheet.
- Procedures for Designing Tools (molds and dies)



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RESEARCH AND TECHNOLOGICAL SERVICES

RESEARCH TEAM

The Group of Engineering Research and Development of New Materials (GIDEM) of ASTIN contributes in an active way to the technological, economical and social development of Colombia by using modern technologies for the development of new materials, as well as their manufacturing processes, which lead to the improvement of Integral Professional Training at SENA.

RESEARCH FIELDS

MAIN LINE

Development of New Materials and their Making Processes

SECONDARY LINE

- Metal Matrix Composites
- Advanced Ceramic Materials
- Hard Coatings
- Polymer Matrix Composites
- Products Design and Transformation Processes
- Recycling

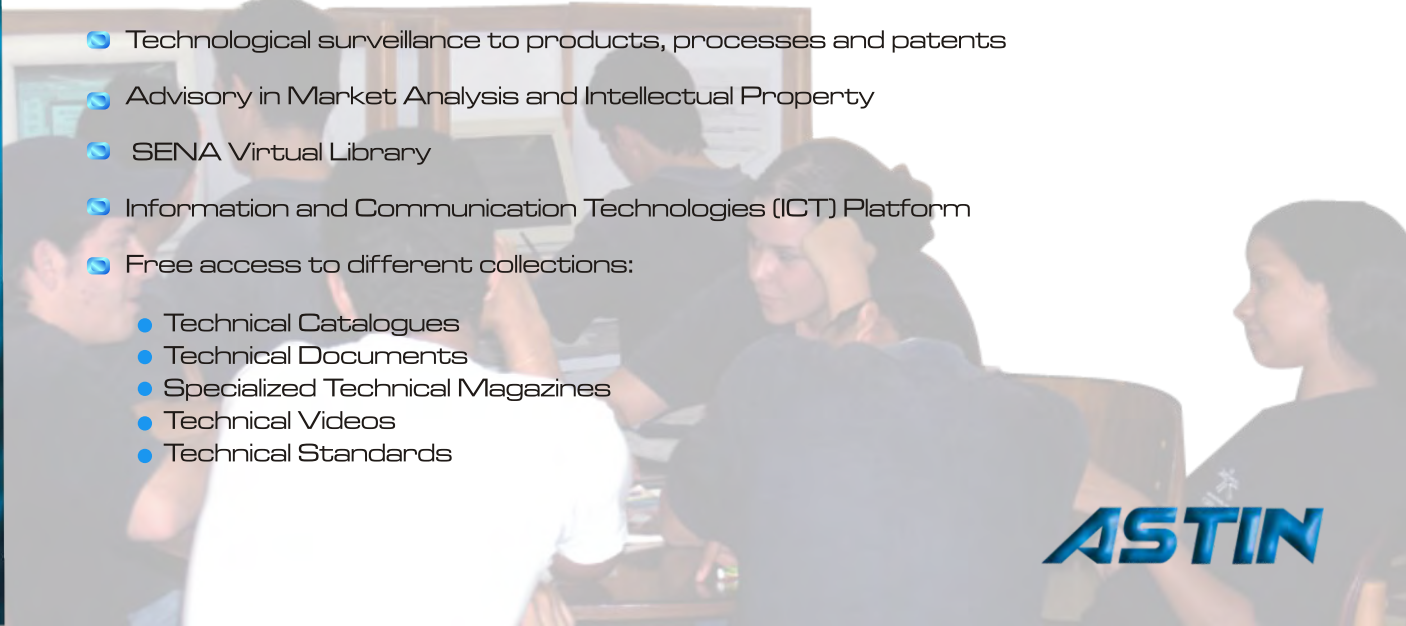


INFORMATION AND TECHNOLOGICAL DISCLOSURE SERVICE

The SIDT (Spanish acronym for Servicio de Información y Divulgación Tecnológica) offers services related to conventional and virtual information management.

The following services are being offered to community:

- Physical and virtual bibliographical databases with specialized information in plastics, rubber and metalworking.
- Publication of "Technical Informer" magazine, with subscription via internet through web site: <http://centroastinsena.blogspot.com>
- Technological surveillance to products, processes and patents
- Advisory in Market Analysis and Intellectual Property
- SENA Virtual Library
- Information and Communication Technologies (ICT) Platform
- Free access to different collections:
 - Technical Catalogues
 - Technical Documents
 - Specialized Technical Magazines
 - Technical Videos
 - Technical Standards



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STANDARDIZATION, EVALUATION AND CERTIFICATION OF LABOR COMPETENCES

NATIONAL SYSTEM OF TRAINING TO EMPLOYMENT

STANDARDIZATION

It is a process established through Industry Clusters with employers, workers, Training Institutions and Government, oriented by SENA as a competent entity, to establish the Standards of Colombian Labor Competences which, in turn, contribute to the decision-making process of labor market, mainly with the topics related to Training, Certification and Human Talent Management.

ASTIN heads two (2) Industry Clusters:

- ✔ Plastic, Rubber and Fibers
- ✔ Business Consultancy

- 📌 ESTABLISHMENT OF LABOR COMPETENCE STANDARDS
- 📌 EVALUATION AND CERTIFICATION OF LABOR COMPETENCES
- 📌 INTEGRATION OF TRAINING PROGRAMS WITH SECONDARY EDUCATION
- 📌 STUDIES OF OCCUPATIONAL CHARACTERIZATION
- 📌 CERTIFICATION OF LABOR COMPETENCES
- 📌 TRAINING CHAIN WITH HIGH EDUCATION





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INTEGRAL PROFESSIONAL TRAINING

CURRICULUM DESIGNING

It is the process by which the Professional Training response required by the productive sector and society is set from standards of labor competences formerly established .

QUALIFIED TRAINING

It refers to the training provided by SENA, leading to a certificate as Qualified Worker, Technician or Technologist. This training may take a year or more, and is mainly oriented to train new human talent qualified for the productive work.

Every person entering to this kind of training undergoes two phases: academic and productive, through apprenticeship contract.

As to Qualified Training, ASTIN offers the following specialties:

QUALIFIED TECHNICIAN

1. Industrial Metalwork Expert
2. Rubber Products Manufacturing
3. Flexographic Printing

TECHNOLOGIST IN:

4. Manufacturing of Plastic Products by Injection Molding
5. Manufacturing of Extruded Plastic Film
6. Manufacturing of Plastic Pipes and Profiles by Extrusion
7. Manufacturing of Plastic Products by Blow Molding
8. Manufacturing of Molds and Dies
9. Designing of Molds for Plastic Materials Processing
10. Die Designing
11. Industrial Metrological Assurance





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INTEGRAL PROFESSIONAL TRAINING

CONTINUING TRAINING

This is an activity of learning and updating workers' competences, which are designed according to local entrepreneurs' requirements in the following fields:

- Manufacturing Process for Polymers and Metals Transformation
- Design of Tools for Polymeric and Metallic Materials Transformation
- Quality Management.
- Maintenance of Machines, Equipment and Tools for Plastic and Metal Transformation
- Metrological Management
- Test Techniques for Quality Control and Assurance in Metallurgical and Metalworking Processes.
- Products Development

INTERNSHIP

- Tests and Trials applied to Metal Materials
- Metrological Assurance
- Process for Transformation of Polymeric and Metallic Materials

VIRTUAL TRAINING (E-LEARNING)

This is a special training methodology in a virtual learning space (VLS), oriented through technological media (PC and Internet) and leading to a schooling - free learning. Thus, virtual training offers learners autonomy to make use of their time to study and get access to information they consider as indispensable for their learning process. E- learners can access to this training at the web page: www.senavirtual.edu.co

ENTREPRENEURSHIP AND ENTERPRISING

ENTREPRENEURSHIP OFFICE

This unit offers ASTIN trainees and other audience the chance of discovering their capabilities as entrepreneurs, by providing the corresponding tools necessary to develop business ideas which could end up with the creation of enterprises sustained in a long run and socially responsible.

- Entrepreneurship sensitizing
- Entrepreneurship and enterprising training
- Consultancy in Business Plan Formulation
- Evaluation of Business Plan Feasibility
- Support in interpieces start up
- Business Strengthening
- Business Fairs
- Business Circles
- Financial Circles





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