

1. General Information

1.1. Name and Address

INDEL BAURU Indústria Eletrometalurgica Ltda.
Address: Joaquim Marques de Figueiredo Street, 2-79
Distrito Industrial I
City: Bauru
State: São Paulo – Country: Brazil
Zip Code: 17034-290
Phone/Fax: +55 (14) 3281 7070
Activity: Protection for Distribution Energy
Since: 25/05/1987
Home page: www.indelbauru.com
E-mail: indelbauru@indelbauru.com.br

1.1.1. Main Directors

President: Antonio Fortunato Brustello
Vice President: Alexandre de Carvalho Brustello
Vice President: Ondina de Carvalho Brustello

1.2. Name and Address (US Company)

INDEL BAURU USA, LLC
Address: 2501 NW 34th Place
City: Pompano Beach - State: FLORIDA
Zip Code: 33069
Phone: (786) 600-1195
EIN: 26-2420396
Home page: www.indelbauru.com
E-mail: indelbauruusa@indelbauru.com.br

2. Commercial Information

2.1. Products

2.1.1. Fuse links

This product is used in the protection of electric power networks, disrupting the electrical current on the occurrence of a short circuit or over current.

Standards: NBR 7282:2011, IEC 60282-2, ANSI C37.41, ANSI C37.42 and NEMA PUB. SG-2.

Indel Bauru can produce on the following types: H, K, T, EF HXO and HYO, STD, IS, IX, I200, DI, QI, N, CRD and Open Link.

2.1.1.1. Cross Reference

This cross-reference has been developed to facilitate the selection of an Indel Bauru Fuse Link comparing with competitive fuse link. The competitive fuse links listed are interchangeable mechanically and with respect to time-current characteristics with Indel Bauru fuse link having the same speed characteristic.

Indel Bauru	Kearney	Cooper Power Systems	S&C	A.B. Chance
N		N	N	
H		H		
K	K	K	K	K
T	T	T	T	T
STD			Standard	
IS	KS	S	KSR	MS
DI		D	DR	
QI	QA		QR	
IX	X			
I200	200			
CRD			Coordinating	

2.1.2. Braids

Material: Stainless Steel, Aluminum, Copper or Tinned Copper.

Types: Braided Straps Flat Rolled, Round Twisted, Round Braided.

Characteristics: Flexible and High Flexibility.

Dimension: from 3/32" to 4".

2.1.3. Cut Outs

In the electrical distribution utility industry a cutout is a combination fuse and switch used in primary overhead feeder lines and taps to protect step-down transformers from current surges and overloads.

Standards: NBR 8124 (PB 995), IEC 60282-2 e ANSI C37.42.

Types: Polymer Cutouts 15 / 27 / 38 kV. Also with Arc Shortening Rod.

3. Profile

Indel Bauru is located in the city of Bauru, in the Midwest state of São Paulo – Brazil. We are one of the main Brazilian companies specializing in the manufacture and sale of Fuse Links and Polymers Cutouts for power transmission networks. Indel Bauru has annual revenue of approximately US\$10,000,000 and produces about 6,000,000 units per year. The total company production capacity is 7,500,000 fuse link units and 20,000 cut out units per year.

In 2004, Indel Bauru has received the certification of ISO 9001:2000 by SGS.

In 2008 Indel Bauru launches its first international branch office, located in USA.

As of 2012, Indel Bauru has more than 70% of the domestic market, and is widely regarded as having the best product and the most modern fuse link company in the world.

Indel's fuse links have been totally developed with proper technology and capital, matching the effective Brazilian and International specifications. At Indel Bauru, we continue to make investments in new product R&D, manufacturing method, quality management, distribution, internal control techniques, and physical plant, in order to maintain our manufacturing leadership position and its continuing ability to anticipate and meet the changing needs of our customers.

3.1. Main Clients

3.1.1. Fuse Links and Cutouts

Brazil: CEMIG, COELBA, LIGHT, AES SUL, RGE, ELETROPAULO, CPFL, CELPA, BANDEIRANTE, ELETROBRAS, CELPE, CELPA, etc.

International: UTE – Uruguay, ANDE – Paraguay, ALTRAVOLTA – Argentina, PFISTERER – South Africa, TAIPOWER – Taiwan, PT SURYA - Indonesia, USA, etc.

3.1.2. Braids

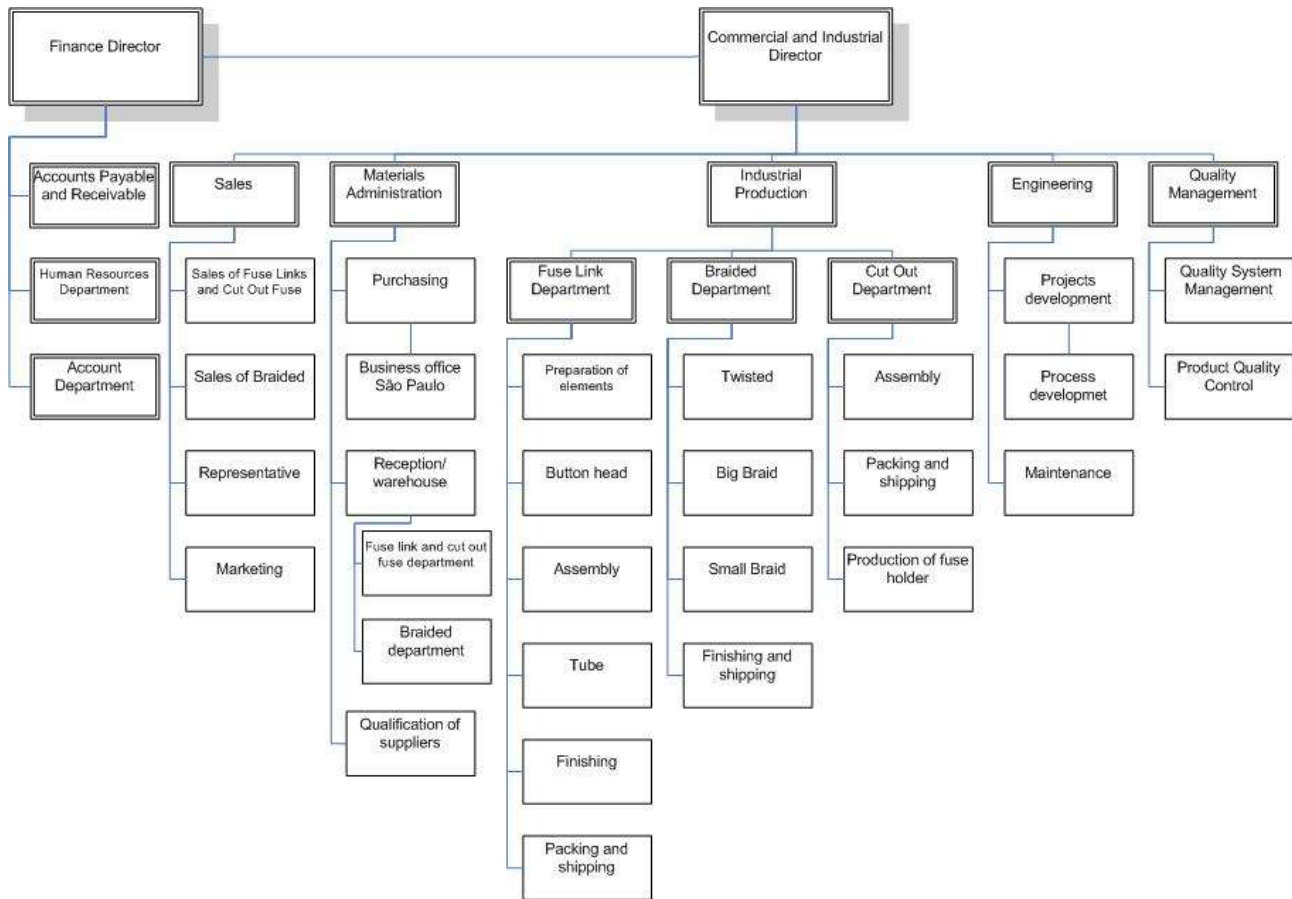
Siemens, Barbanera Qualitá, Laelc, Beghin, 3M, Tyco, Alston, etc.

3.2. Main Suppliers

Company	Product	Country
Phenix Tube Co.	Fuse Link Tube	USA
Alcometalic	Copper	Brazil
Difil	Copper wire	Brazil
Cartonagem Henrique	Packages	Brazil
Cartonagem Salinas	Packages	Brazil
Plasvipel	Individual Plastic Bags	Brazil
Brastak	Silver	Brazil
Novo Sul	Polymer Insulator	Brazil / Import the raw material from USA

4. Organization and Management

4.1. Organization



5. Facilities

The Indel Bauru is located on a total area of 8.370 m² and 2.560 m² of building area, separated on two units. Our Administration Offices, Fuse Link Production Line and Braid Production Line are located in Plant I. Our Quality System department, Marketing department, Research and Development and the Cutout production line are located in Plant II.



Plant I



Plant II

5.1. Laboratories

The Indel Bauru Laboratories are located in the same building as our production lines.

All the following tests can be made at Indel Bauru Laboratory:

1. Visual/Dimensional verification
2. Mechanical resistance (10daN)
3. Electrical resistance
4. Minimum and Maximum characteristic of time x current
5. Minimum and Maximum characteristic of time x current after aging
6. Dynamic verification of operation
7. Temperature rise
8. Electromechanical (for fuse link type H)

All tests that are required by the following standards are made in conformity with the norms.

- ✓ NBR 7282:2011
- ✓ IEC 60282-2
- ✓ ANSI C37.40
- ✓ ANSI C37.41
- ✓ ANSI C37.42
- ✓ NEMA No. SG2



Laboratory I



Laboratory II

The breaking capacity test was developed at:

- ✓ CEPEL – Brazil
- ✓ Powertech Labs – Canada

5.2. Production Area

The production area of the fuse links stands out for its organization and cleanliness, also presents all the favorable conditions of temperature, illumination and comfort for the employees, during the manufacture process.



Both the braid installation and cutout plants have the latest equipment and technology for the production and development of the highest quality products.



Many tools used in the production had been developed by the company staff through coordinated works.

6. Machines and Equipment

Production		Laboratory	
Qtd.	Description	Qtd.	Description
1	Wire Cut Machine	1	Micro-ohmmeter
6	Crimping machine	1	Transformers 45 kVA
4	2t Electronica Press	1	Transformers 75 kVA
2	12t Press	1	Ampere meter
5	4t Press	1	Ampere meter Pliers
1	8t hydraulic press	1	Oscilloscope 60Mhz 1GS/s
1	Micro-ohmmeter	1	Set of current transforming
2	Packing Machines – Plastic Bags	1	Current monitor
4	Wimbles	1	Cabin of assay for 0,1s
2	Screw Machine	2	Table for type assays
1	Machine to Cut the Tube	1	Table for rise temperature test
3	Machine to cover the Paper Tube	1	Transformers of High Current Low Tension 10 kVA
9	Twist machine	1	Hi-Pot
2	Braided machine with 12 spindles	1	Computer
2	Braided machine with 24 spindles		
2	Braided machine with 36 spindles		
1	Braided machine with 48 spindles		
4	Small Braided machine with 24 spindles		
16	Small Braided machine with 16 spindles		
12	Winding machine		
1	Rolling machine		
1	Oven		
2	Stamps Machine – Stamp the Plastic bag		
2	Compressor		
2	Drilling and Milling Machine		
1	Electro erosion		
2	Lathe machine		
2	Automated laminator		
2	Automated press		
2	Laser Printer		
4	Computer		
28	Vernier caliper and micrometer		
5	Weighing-machine		

7. Social Responsibility Policy

Indel Bauru, by this politics, compromises to be in compliance with all the listed requirements below and the national and others applicable laws, including the recommendations of the OIT (International Organization of the Work) and taking as reference the SA 8000 standard

Child Labor

Indel Bauru does not engage in or support child labor, and fulfills all the OIT recommendations in relation to the minimum age and the use of child labor

Coerced Labor

Indel Bauru does not engage in or support the use of coerced labor, demanding of its workers only the fulfillment of its duties, for which they are duly remunerated

Health and security

Indel Bauru provides to its employees a safe environment and healthful work, taking all the necessary measures to prevent accidents and damages to their health. Including bathrooms, access to potable water and hygienic facilities for food storage.

The CIPA president (Internal Commission of Accidents Prevention), that is a senior management representative, is responsible for the health and safety of all employees, and must assure that all the employees regularly receive training on health and security bases.

Freedom of association & right to collective bargaining

Indel Bauru recommends to its employees the association to any union of their category and assures the freedom of collective bargaining. It also ensure that representatives of such personnel are not the subject of discrimination and that such representatives have access to their members in the workplace

Discrimination and Harassment

Indel Bauru does not engage in or support discrimination in hiring, remuneration, access to training, promotion, termination or retirement based on race, caste, national origin, religion, disability, gender, sexual orientation, union membership, political affiliation, or age.

Indel Bauru also does not engage in or support any physical, sexual and psychological harassment or other objectionable conduct.

Disciplinary practices

Indel Bauru does not engage in or support the use of corporal punishment, mental or physical coercion, and verbal abuse

Working hours

The company shall comply with applicable laws and industry standards on working hours. All overtime work is voluntary and remunerated in special base in accordance with the applicable laws.

Remuneration

Indel Bauru pays its employees at least the minimal wage stipulated for the legislation for the category. Deductions of wages are not made by indiscipline, and the composition of the wages and benefits is detailed, clear and regularly for all the workers

The commitment is firm and continuous to improve the System of Management of Social Responsibility, registering, implementing, keeping and communicating to all its employees, including the managers, which have been directly employed, contracted or of any form that represents the company, making this politics public.

8. Health and Safety Policy

Indel Bauru has as commitment the continuous improvement of the quality of life of its employees, offering a safe environment of work and activities of prevention of occupational illnesses.

The Indel Bauru Health and Safety Policy is based on OHSAS 18001 and is consolidated in the following principles

- ✓ Continuously analyze, revise and improve the Health and Safety Policy
- ✓ Fulfill the current and applicable law of Health and Safety Policy
- ✓ Minimize the risks inherent to the work environment
- ✓ Provide training, searching the perfecting of the work safety
- ✓ Provide activities to minimize, to prevent and to minimize the risks of occupational illnesses
- ✓ It is duty of the Internal Commission of Accidents Prevention (CIPA) to watch over the security of all the employees
- ✓ It is duty of all the employees to watch over for its security, of its colleagues and the people who will be involved in its activities

This policy represents the commitment of the senior managers and all the employees of the Indel Bauru Indústria Eletrometalurgica Ltda, with the broadcasting of activities that promote Health and Safety Policy.

9. Environmental Policy

Indel Bauru declares its commitment with an environmental correct performance, controlling the impact of its activities, products and jobs at the environment.

The Indel Bauru environmental policy is based on ISO 14001 and the Environmental Management Standard (EMS) adopts the following principles:

- ✓ Continuously analyze, revise and improve the EMS;
- ✓ Fulfill the current law and applicable related to the environmental aspects of our activities, products or services;
- ✓ Always work targeting the prevention of the pollution, and the rationalization of the use of natural resources;
- ✓ Promote and collaborate with the materials recycling;
- ✓ Provide training to our employees to awareness about the importance of their jobs and responsibilities in reaching the EMS, about the environmental impacts of their activities, and potentials consequences of non-observance of operational procedures;
- ✓ Keep an open dialogue with our suppliers, to spread our Environmental Protection Policy.

This policy is the Indel Bauru Indústria Eletrometalurgica Ltda. commitment with preservation and protection of the environment as part of a sustainable development.

10.1. Goals

Establish all the systematic and the interaction of the fuse link production process steps: material reception, production, inspection, final essays and expedition.

10.2. References

ISO 9001:2015

MQO1-00 – Quality Management System Manual

10.3. Sectors involved

This quality plan applies to sectors of: material administration, quality control, sales, project and development, production, human resources and quality management.

10.4. Description

The entire plan is a logical sequence of the production process steps, and the details are in the instructions and procedures.

The production requirements and verification fuse link were defined and documented in the Quality Management Instructions and Procedures, such as:

- ✓ Quality Plan as demonstrated in the annexed flowchart;
- ✓ Controls identification; resources, abilities and devices attainment;
- ✓ Guarantee that the productive process, inspection and inherent documents are compatible;
- ✓ Inspection and control techniques are up-to-date and new techniques are added when necessary;
- ✓ To prevent the development of measurement capabilities that are beyond the current knowledge;
- ✓ Inspection planning;
- ✓ Definition of the acceptance standards and inspection characteristics;
- ✓ Quality records preparation.

10.5. New product and development

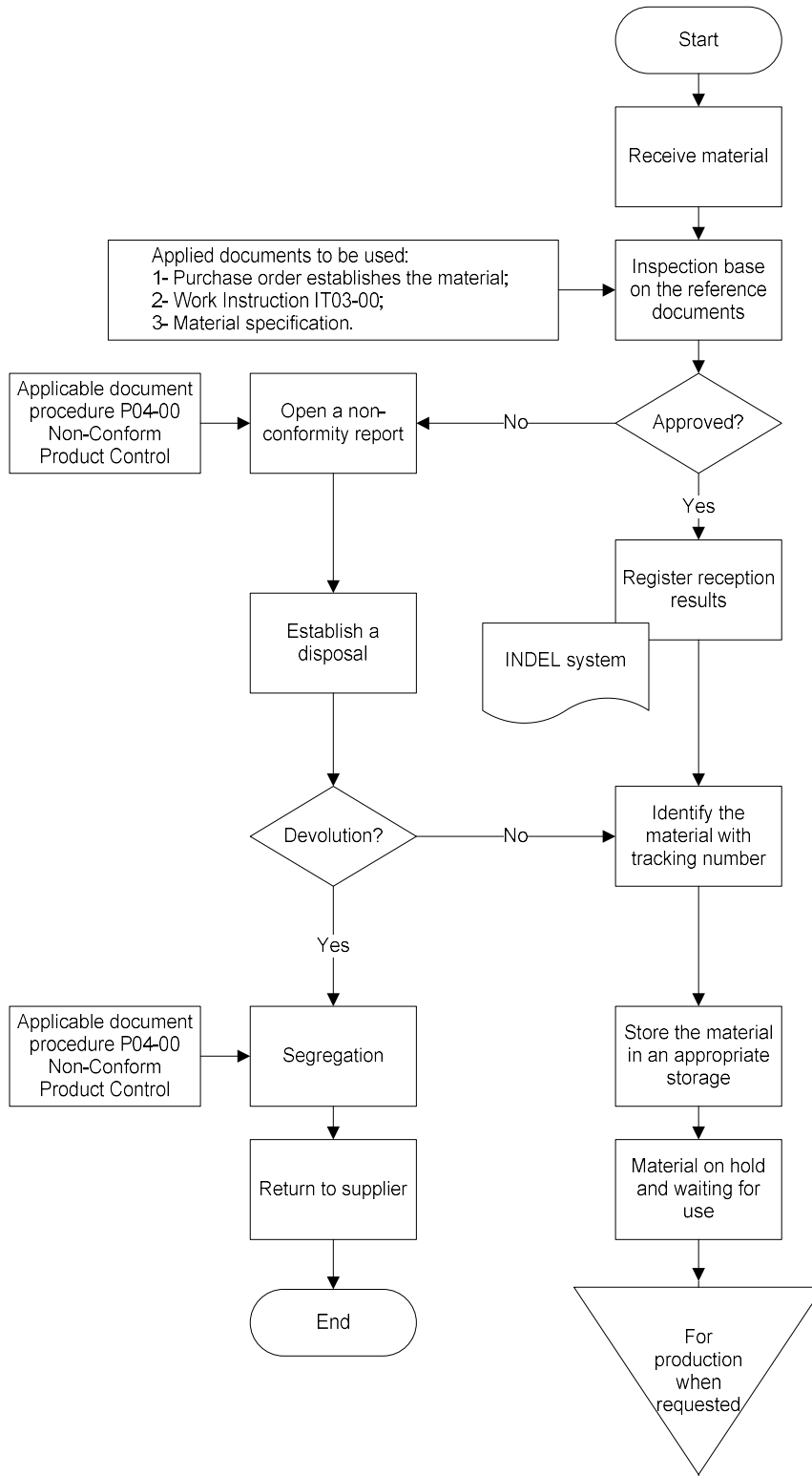
The new product and development requested must follow the same plan defined here.

If the new product or development needs any alteration in this plan, the alteration must be informed to production sector by the development and project sector

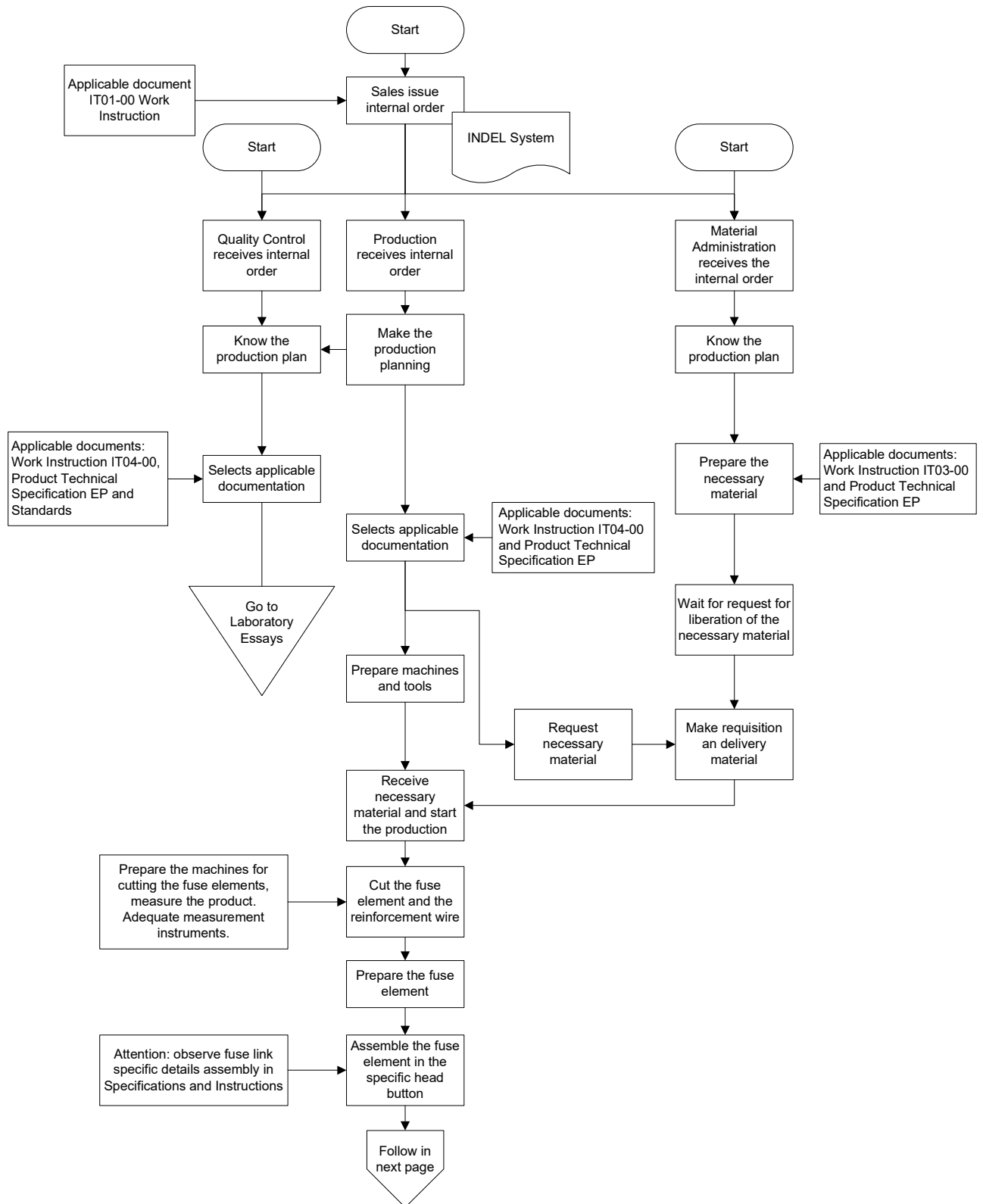
After the validation and conclusion of the new product or development, the involved sectors must analyze and make the necessary alterations.

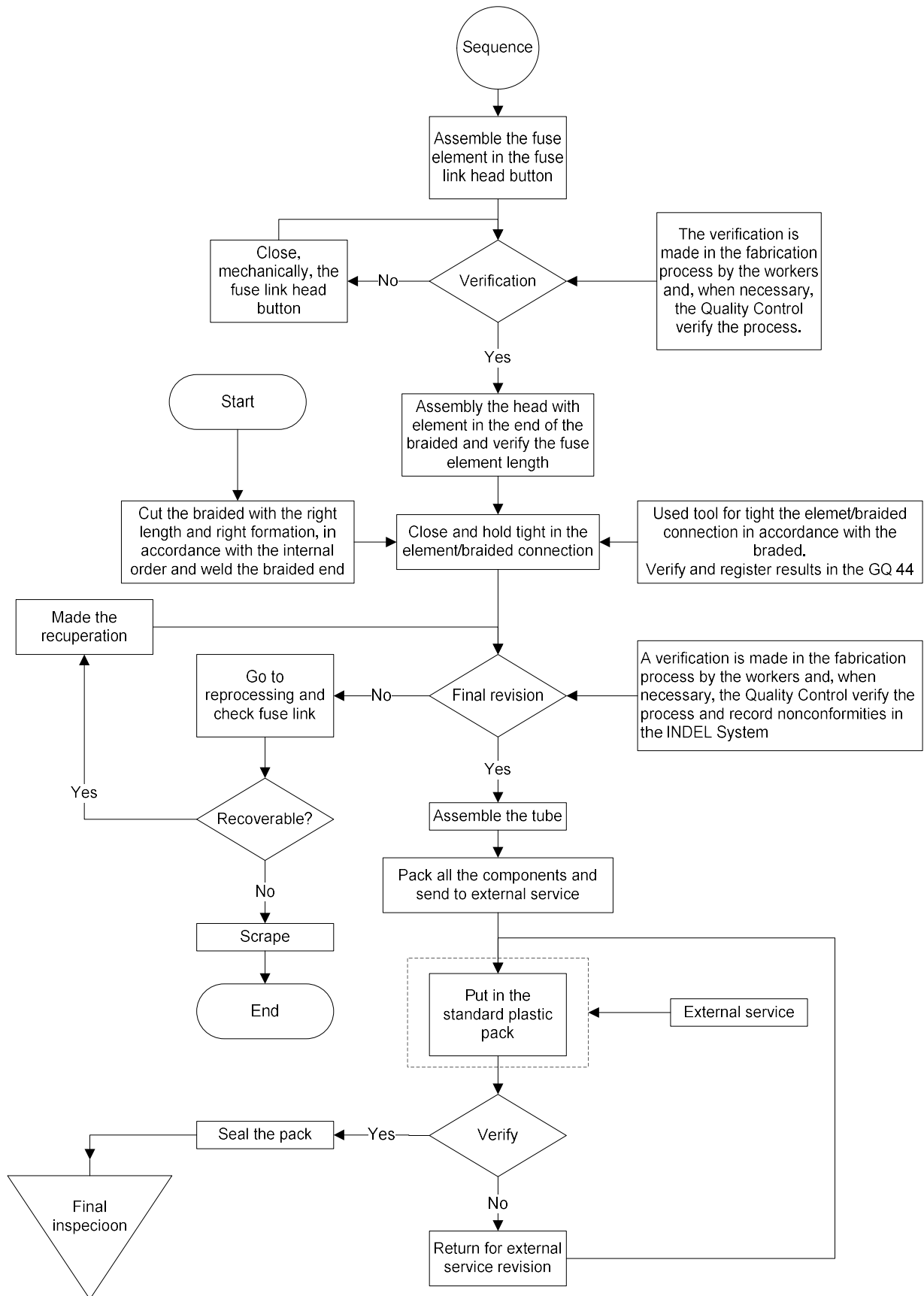
10.6. Flowcharts

10.6.1. Receiving the materials

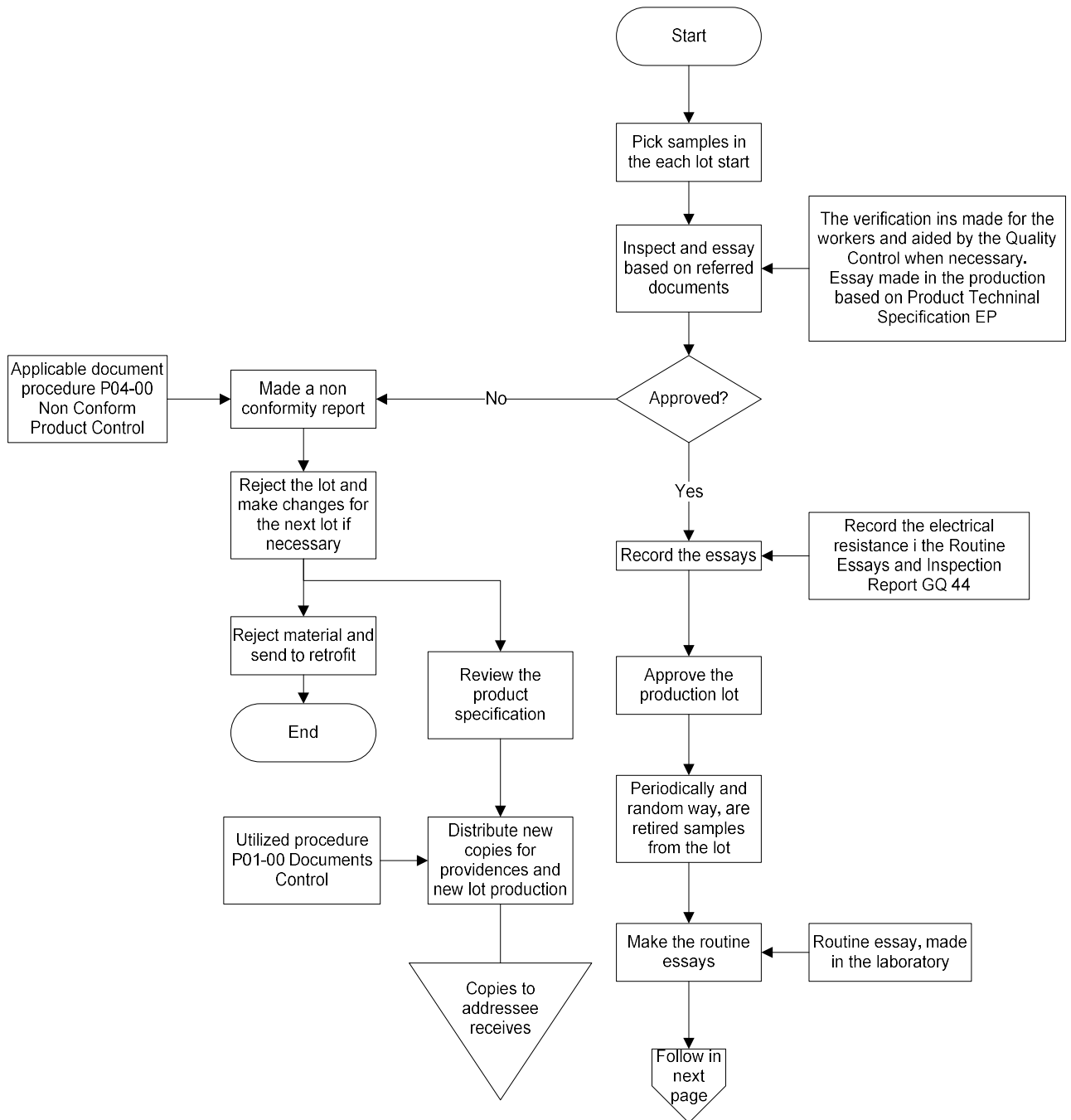


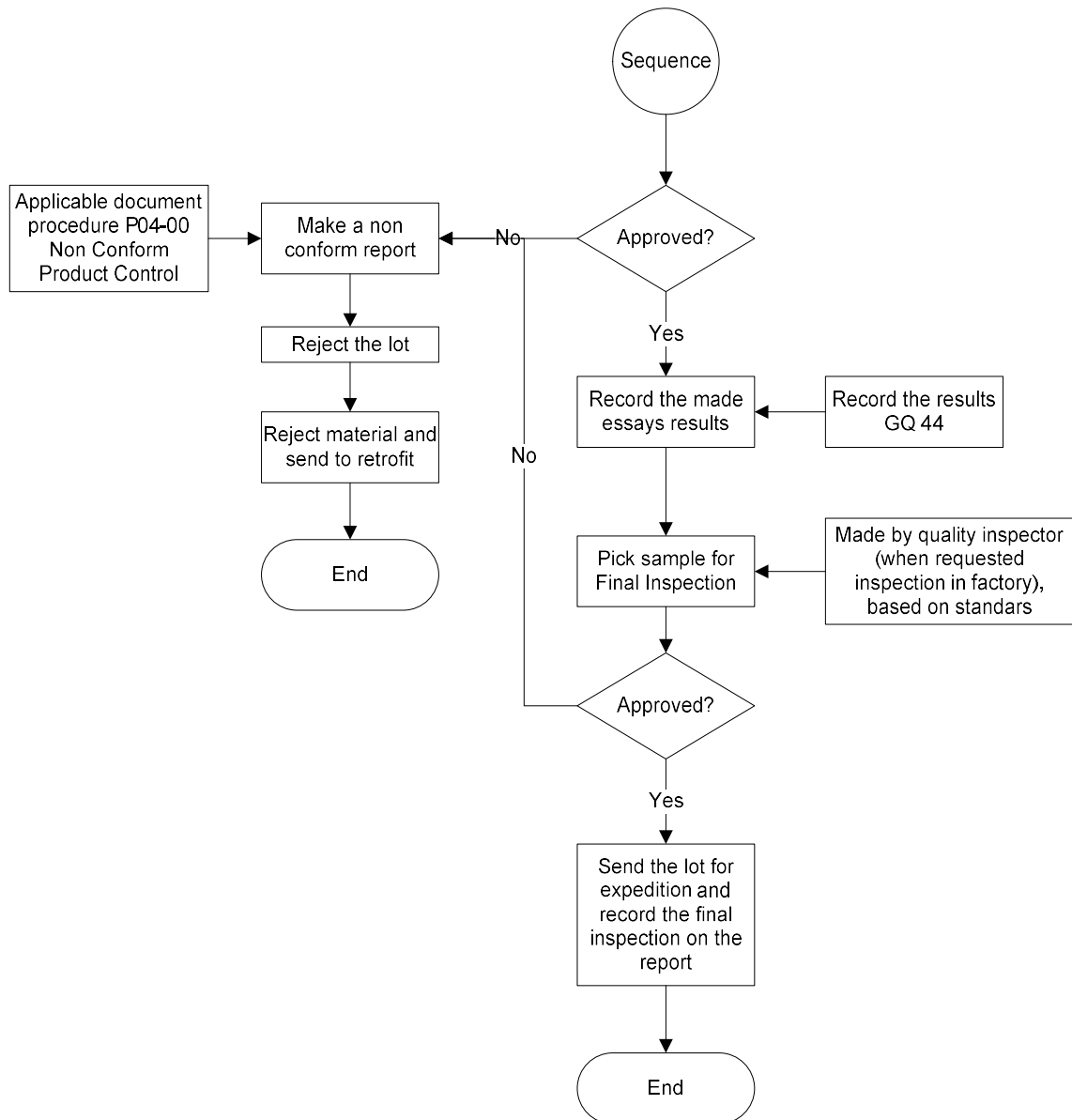
10.6.2. Production





10.6.3. Inspection, final assays and expedition





11. Manufacturer's Certificate of Warranty and Return Policy

We hereby warrant that all equipment to be supplied shall be new and free of defects in material and workmanship and would be of the kind and quality specified in the technical specification. The warranty is valid for 1 (one) year from the date of delivery and if within the time period, the purchaser discovers defects in workmanship and/or material, notifies us promptly in writing. We shall with all reasonable speed remedy such defects or non-conformance to the specification at our expense by adjustment, repair or replacement, at the option of the Purchaser.