INTERNATIONAL ELECTROTECHNICAL COMMISSION SYSTEM FOR CERTIFICATION TO STANDARDS RELATING TO EQUIPMENT FOR USE IN EXPLOSIVE ATMOSPHERES (IECEx SYSTEM)

Circulated to: Ex Management Committee, ExMC

TITLE: IECEx Assessment Report for the acceptance of Associação NCC Certificações do Brasil as an IECEx Certification Body (ExCB)

INTRODUCTION

This document contains the IECEx Assessment Report for the acceptance of *Associação NCC Certificações do Brasil GmbH* - as an IECEx Certification Body (ExCB) within the IECEx System.

Please consider this assessment report and return the completed voting form, (a separate document - in Word Format), to the IECEx Secretariat by 110622.

Your speedy response to the voting process will be very much appreciated.

Chris Agius

IECEx Secretariat

Address: **IECEx Secretariat** **SAI Building** **286 Sussex Street** **Sydney 2000** **Australia**	**Tel: +61 2 8206 6940** **Fax: +61 2 8206 6272** **Email: chris.agius@iecex.com** **Internet: www.iecex.com**

IECEx ASSESSMENT REPORT for Associação NCC Certificações do Brasil IECEx Certification Body, ExCB

Type of Assessment:

Initial Assessment for Candidate ExCB **X**

Re-Assessment of ExCB

Scope Extension of ExCB

1. OBJECT AND FIELD OF APPLICATION

1.1. Country:

Brazil

1.2. Name of Candidate ExCB

Associação NCC Certificações do Brasil
Rua Conceição, 233 - Sala 2512 - Campinas - SP - CEP 13010-916 - Brasil

1.3. Members of the Assessment Team

Heinz Berger - IECEx Officer - IECEx Lead Assessor
Vijay Varma - IECEx Expert Assessor

1.4. Place and Date of Assessment

Associação NCC Certificações do Brasil
Rua Conceição, 233 - Sala 2512 - Campinas - SP - CEP 13010-916 - Brasil

December 14th & 15th, 2010

1.5. Assessment References

i) IECEx 02 (current version)
ii) IECEx OD 003 IECEx Assessment Procedures (current version)
iii) IECEx OD 005 IECEx Quality System Requirements for Manufacturers- Parts 1and 2 (current version)
iv) IECEx OD 009 - IECEx Certified Equipment Scheme, Procedures for the Issuing of IECEx Certificates of Conformity, IECEx Test Reports and IECEx Quality Assessment Reports (current version)
v) IECEx OD 007 IECEx ACB Assessment Checklist for ISO/IEC Guide 65 (current version)
vi) IECEx OD 025 (current version) Guidelines on the Management of Assessment and Surveillance programs for the assessment of Manufacturer's Quality System, in accordance with the IECEx Scheme.

vii) IECEx Document F-001 (QAR Form)
viii) ISO/IEC Guide 65:1996
ix) IECEx OD 17 Drawing and documentation Guidance for IECEx Certification (current version)
x) ExCB application documents of December 1st, 2008

1.6. *Scope of Application*

Number	Title	Acceptance
60079-0 Edition 5	Explosive atmospheres - Part 0: Equipment - General requirements	YES
60079-1 Edition 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures 'd'	YES
60079-2 Edition 5	Explosive atmospheres - Part 2: Equipment protection by pressurized enclosures 'p'	YES
60079-5 Edition 3	Explosive atmospheres - Part 5: Equipment protection by powder filling 'q'	YES
60079-6 Edition 3	Explosive atmospheres - Part 6: Equipment protection by oil immersion 'o'	YES
60079-7 Edition 4	Explosive atmospheres - Part 7: Equipment protection by increased safety 'e'	YES
60079-11 Edition 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety 'i'	YES
60079-15 Edition 4	Explosive atmospheres - Part 15: Equipment protection by type of protection 'n'	YES
60079-18 Edition 3	Electrical apparatus for explosive gas atmospheres - Part 18: Construction, test and marking of type of protection encapsulation 'm' electrical apparatus	YES
60079-25 Edition 2	Explosive atmospheres - Part 25: Intrinsically safe systems	YES
60079-26 Edition 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga	YES
60079-27 Edition 2	Explosive atmospheres - Part 27: Fieldbus intrinsically safe concept (FISCO)	YES
60079-31 Edition 1	Explosive atmosphere - Part 31: Equipment dust ignition protection by enclosure "t"	YES
61241-0 Edition 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements	YES
61241-4 Edition 1	Electrical apparatus for use in the presence of combustible dust - Part 4: Type of protection 'pD'	YES
61241-11 Edition 1	Electrical apparatus for use in the presence of combustible dust - Part 11: Protection by intrinsic safety 'iD'	YES
61241-18 Edition 1	Electrical apparatus for use in the presence of combustible dust - Part 18: Protection by encapsulation 'mD'	YES

1.7. *Candidate ExCB Persons Interviewed*

Name	Position
Bruno Simioni Rosa	Certification Analyst
Diego Henrique de Oliveira	Certification Analyst
Fernando Menossi	Trainee
José Paulo Cassiano	Certification Analyst
Mileni Cristina Salgado	Customer Service
Wilson Bonato	Technical Manager
Rafael Zecchin	Account Manager
Denise Guisard	Quality Manager

1.8. *Legal Entity of the Candidate ExCB*

NCC Brazil is registered under the laws of Brazil as a not-profit organization by the "República Federativa do Brasil" under the number 04.192.889/0002-98. The valid registration document was provided during the assessment.

1.9. *Associated Testing Laboratory*

The Associação NCC Certificações do Brasil, Certification Body located at Rua Conceição, 233- Suite 2505, Campinas, SP, Brazil works with the DEKRA Certification B.V. Laboratory, (formerly KEMA Laboratory) an existing Ex Test Laboratory, located at Utrechtseweg 310, 6812 AR Arnhem, The Netherland.

The contract with the DEKRA Certification B.V laboratory was signed on November 26th, 2010. The contract was checked during the assessment and found to meet the requirements of the IECEx.

1.10. *Associated Certification Functions*

NCC participates in the IECEE CB Scheme as a recognizing NCB. NCC Brazil is also involved in certification activities based on INMETRO regulations.

1.11. *National Marks and Certificates*

NCC operates a Brazilian national certification program, using INMETRO Mark. Refer to the QM, clause 1) History of Associação NCC Certificações do Brasil.

1.12. *Financial Support*

NCC Brazil receives its income from activities in the area of conformity assessment, quality management system certification, sale of publications and income from seminars and lectures.

1.13. *History*

Associação NCC Certificações do Brasil, hereinafter NCC Brazil is a not-for-profit organization.

Recognized by Anatel (National Telecommunications Agency) as a Designated Certification Body named (OCD), accredited by Inmetro (National Institute of Metrology, Standardization and Industrial Quality) as a Product Certification Body

(OCP - 0034) on 16 October 2003 and as a certification body of Quality Management Systems (OCS-0033) on June 20, 2005. It was also recognized by DENATRAN, in August 2009, as a Certification Body (OCDD) to operate conformity assessment for antitheft system.

NCC was evaluated and recommended by the IECEE on November 23, 2007 to be a body that recognizes the certificates issued by the CB-Scheme (NCB - Recognizing National Certification Body).

In November, 2010 NCC applied to the IECEx System to perform product conformity evaluation and repair and overhaul assessment. This is being formalised as a separate application.

1.14. *Standards Accepted*

See clause 1.6 of this report.

1.15. *National Differences to IEC Standards*

There are no national differences to IEC standards, all Brazilian standards for Ex product are harmonized with IEC standards.

2. ORGANISATION

2.1. *Names, Titles and Experience of the Senior Executives*

Name	Title	Experience
Sergio Toshio	President	23 years (Telecom Management)
Wilson Bonato	Technical Manager	25 years (Product Quality and Reliability Management; 9 in Product Certification and 5 Ex Certification)
Walter Fernandes	CFO	28 years (Financial)
Marcelo Leite	Sales Manager	15 years (10 Product Certification)

2.2. *Name, Title and Experience of the Quality Management Representative*

Name	Title	Experience
Denise Guisard	Quality Manager	4 years

2.3. *Name and Title of Nominated Principal Contact*

Name	Title	Comments
Wilson Bonato	Technical Manager	Wilson.bonato@ncc.org.br

2.4. *Name and Title of Signatories for Certification*

Name	Title	Comments
Sergio Toshio	President	Sergio.toshio@ncc.org.br
Wilson Bonato	Technical Manager	Wilson.bonato@ncc.org.br

Several CV's were checked during the assessment with main focus on education, confidentiality agreements and training records. They were found to meet the requirements of the IECEx.

2.5. *Other Employees in ExCB activity*

Name	Title/Comments	Responsibility	Experience in Ex
Diego Henrique de Oliveira	Certification Analyst	Analyze technical documentation/ prepare RACTS/monitor product testing laboratories/ take care of all the steps of the certification process/give technical advices. Verify technical analysis and auditor. (reference: MDC rev.10)	4 years and 1 months
José Paulo Cassiano	Senior Certification Analyst	Analyze technical documentation/ prepare RACT/monitor product testing laboratories/ take care of all the steps of the certification process/give technical advices. Verify technical analysis and Lead auditor (reference: MDC rev.10)	8 years
Jorge Antonio Mignoni	Certification Analyst	Analyze technical documentation/ prepare RACT/monitor product testing laboratories/ take care of all the steps of the certification process/give technical advices. Verify technical analysis and auditor. (reference: MDC rev.10)	3 years and 7 months
Bruno Simioni Rosa	Certification Analyst	Analyze technical documentation/ prepare RACTS/monitor product testing laboratories/ take care of all the steps of the certification process/give technical advices. Verify technical analysis and auditor. (reference: MDC rev.10)	3 years and 6 months
Fernando Menossi	Trainee	Comply with all tasks requested by superior/Support technical activities (reference: MDC rev.10)	2 years
Mileni Salgado	Customer Service	Customer service/Analyze customer documentation/Prepare RACT (only for QMS) and auditor. (reference: MDC rev.10)	4 years and 8 months
Rafael Zecchin	Account Manager	Elaborate commercial proposals/customer interface and application review.	5 years

2.6. *Organizational Structure*

See attached organization chart in **ANNEX 1**.

2.7. *Administration (including Indemnity Insurance)*

See **ANNEX 1** for the administration of NCC. Certification administration is organized in order to handle all documentation and correspondence with view to certification activities.

2.7.1 Indemnity Insurance

NCC presented an insurance certificate issued by the ACE Seguradora S.A., Sao Paulo, Brazil, with the number 17.78.0012405.27 for professional national and

international coverage. The current contract ends on March 10th, 2012. The contract was checked, the requirements of IECEx are fulfilled.

3. RESOURCES

A total of 56 employees are working in NCC Brazil in the area of product and system certification. 7 employees are involved in Ex certification activities which includes administration, certificate release, manufacturer auditing, general handling, customer service, and trainings.

4. COMMITTEES / Governing Board / Appeals / Advisory Board

NCC established a committee to ensure impartiality in the certification process. The purpose of this committee is described in the PNCC 07, clause 5.3. The procedure was checked during the assessment and found to meet the requirements of IECEx.

5. CERTIFICATION OPERATIONS

5.1. *National Approval/Certification Methods*

NCC operates a national system utilizing IECEx documentation as described in PNCC-42, clause 5. At present, NCC Brazil performs all audit activities. This may change as soon Brazilian laboratories will be cleared for IECEx operations. The national system may accept IECEx ExTrs and QARs and was checked during the assessment and found to meet the requirements of the IECEx.

5.2. *Certification Policy*

The certification policy is described in PNCC-42 and covers the requirements of the IECEx System.

5.3. *Application for Certification*

The application for certification is described in PNCC-42, clause 5.1.1. There is a comprehensive application form available also covering IECEx activities.

5.4. *Certification Decision*

QM and PNCC 42 clearly define the IECEx process including how the certification decision is taken. It is stated that the person taking the decision shall not participate directly in the evaluation or auditing process leading to the IECEx Certification. The process for each project is documented, including the use of a RACT (Technical Conformity Evaluation Report). The procedure was checked during the assessment and found to meet the requirements of the IECEx.

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6. STATISTICS

6.1. Certificates Issued

Number of **certificates** issued under the **national scheme** in the preceding four years for each type of protection:

Standards	Title	Number of issued certificates				
		2007	2008	2009	2010	Total
60079-0	Explosive atmospheres - Part 0: Equipment - General requirements	---	---	---	---	**Part 0 included in numbers below**
60079-1	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures 'd'	25	35	82	70	212
60079-2	Explosive atmospheres - Part 2: Equipment protection by pressurized enclosures 'p'	18	29	22	25	94
60079-5	Explosive atmospheres - Part 5: Equipment protection by powder filling 'q'	-	-	-	1	1
60079-6	Explosive atmospheres - Part 6: Equipment protection by oil immersion 'o'	-	-	-	1	1
60079-7	Explosive atmospheres - Part 7: Equipment protection by increased safety 'e'	4	9	19	28	60
60079-11	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety 'i'	9	43	27	44	123
60079-15	Explosive atmospheres - Part 15: Equipment protection by type of protection 'n'	6	8	20	16	50
60079-18	Electrical apparatus for explosive gas atmospheres - Part 18: Construction, test and marking of type of protection encapsulation 'm' electrical apparatus	2	4	1	7	14
60079-25	Explosive atmospheres - Part 25: Intrinsically safe systems	-	-	-	-	-
60079-26	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga	-	-	21	38	59
60079-27	Explosive atmospheres - Part 27: Fieldbus intrinsically safe concept (FISCO)	-	-	1	1	2
60079-29-1	Explosive atmospheres - Part 29-1: Gas detectors - Performance requirements of detectors for flammable gases	-	-	-	-	-
61241-0	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements	---	---	---	---	**Part 0 included in numbers below**
61241-1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures 'tD'	2	8	28	35	73
61241-4	Electrical apparatus for use in the presence of combustible dust - Part 4: Type of protection 'pD'	-	-	-	-	-

Standards	Title	Number of issued certificates				
		2007	2008	2009	2010	Total
61241-11	Electrical apparatus for use in the presence of combustible dust - Part 11: Protection by intrinsic safety 'iD'	-	-	-	-	-
61241-18	Electrical apparatus for use in the presence of combustible dust - Part 18: Protection by encapsulation 'mD'	-	-	-	-	-

7. DOCUMENTATION

7.1. Quality Manual

Quality Policy Manual of NCC describes company's quality system structure.
The implementation and development of quality management system of the NCC, with impartiality and objectivity, meets the General Requirements Document for Bodies operating Product Certification Systems, ABNT ISO / IEC Guide 65:1997, General Records of the document for bodies operating assessment and Certification / Registration of Quality Systems, ABNT ISO / IEC 17021:2007 standard, the guidelines established by the IAF and the Guidelines for Auditing Quality Management System and / or Environment described in standard NBR ISO 19011:2002.

7.2. Procedures

The relevant documents for IECEx Equipment Certification are presented below:

PNCC-01	Drafting and Document Control
PNCC-02	Management Reviews of the Quality System
PNCC-03	Internal Audits
PNCC-04	Control of record
PNCC-05	Training
PNCC-06	Hiring and Dismissal of personnel
PNCC-07	Impartiality
PNCC-08	Contracting and Subcontracting Services
PNCC-09	Grant, maintain, withdraw, extension, reduction, suspension and transfer of certification
PNCC-10	Complaints
PNCC-11	Non-conformities, Corrective and Preventive Action
PNCC-13	Use of licenses, certificates and marks
PNCC-42	IECEx Product Certification Process

These were reviewed and found to meet IECEx requirements.

7.3. Work Instructions

Work instructions for certification activities are integrated into the PNCC-42 procedure and were to meet the Scheme's requirements.

7.4. Records

The records pertaining to quality management system are stored for a period previously established, according PNCC-04 and were found to meet the Scheme's requirements.

7.5. Document Change Control

The document change control is established in the PNCC-01 procedure which meets the Scheme's requirements.

8. CONFIDENTIALITY

The confidentiality issue is described in the QM, clause 4.10. Each employee must sign a confidentiality agreement carrying. PNCC-07 establishes the criteria of Impartiality Management. All confidentiality agreements of personnel active in the IECEx System were checked and found to be acceptable.

9. PUBLICATIONS

NCC advises its services on the Internet under the URL www.ncc.org.br.

10. NATIONAL ACCREDITATION

NCC holds accreditation from CGCRE/INMETRO for Safety Product Certification Body, and Quality Management System Certification Body in accordance with the requirements of ISO/IEC Guide 65 (see **ANNEX 2),** scope includes Explosive atmospheres and ISO/IEC 17021 in **ANNEX 3**.

Furthermore, NCC is appointed by the Anatel as Certification Body to Telecommunication Products and by the Denatran as Certification Body to Monitoring and Traceability Products.

11. RECOGNITION AND AGREEMENTS

NCC participates in other Schemes such as the IECEE CB Scheme.

12. INTERNAL AUDIT AND PERIODIC MANAGEMENT REVIEW

NCC procedures require annual audits according to clause 4.7 of the QM. All activities are covered at least once a year. The relevant procedure is PNCC-03. The audits are normally performed by an external assessor. The last internal audit was performed from May 19th to 21st, 2010. The assessment report was checked during the IECEx initial assessment and found be acceptable. The resolution of open issues is controlled by use of a specific form with the number FNCC-11.

The last Management Review (according to clause 4.7 of the QM) was held on December 6th, 2010 under the new president (Sergio Toshio Yochiy). The report was presented during the assessment and found to be acceptable.

13. SUBCONTRACTING, USE OF OTHER LABS AND USE OF OTHER LOCATIONS

NCC operates subcontracting according to the QM, clause 4.4. All tests are outsourced to DEKRA Certification B.V. Laboratory, Arnhem, the Netherlands. DEKRA Certification B.V. operates a recognized IECEx Certification Body and Testing Lab.

The contract between NCC Brazil and DEKRA Certification B.V. Laboratory was checked and found to meet the requirements of the IECEx. The scope of standards is defined in this contract.

14. TRAINING

NCC procedures require annual training plans according to procedure PNCC 5. Records of training activities are maintained locally at each department within NCC and are registered in the CVs.

Evidence was provided of training carried out with relevant staff on IECEx procedures and publications.

15. ASSESSMENT OF MANUFACTURERS AND ISSUE OF QAR'S

The assessment of manufactures is described in the QM in procedure PNCC-42. NCC maintains a team of auditors in order to satisfy the needs of their customer.

The following QARs (based on national Ex certification) were checked during the assessment:

9029/09.4, # 12355/10.5, # 9507/09.1, #10807/09.1, #10199/09.1 and 11640/10.1

The latest reports were checked and found to meet the requirements of the IECEx. NCC Brazil is presently switching to the official IECEx QAR forms for international activities.

16. COMPLAINTS AND APPEALS (Including appeals to IECEx)

The complaints and appeal procedures are described in the QM, clause 15 and procedure PNCC-10. The procedure was checked and found to meet the requirements of the IECEx.

17. SPECIAL FACTS TO BE NOTED

17.1. Supporting Documentation

Copies of additional supporting information for this assessment have been provided to the applicant and the IECEx Secretariat. These include:

- Details of issues raised and how these have been resolved are included as part of OD 006 the Site Assessment Report
- Competence Matrix
- List of Subcontractor
- Checklist for ISO/IEC Guide 65

18. COMMENTS (Including issues found during assessment)

During the assessment non-conformances were found in the area of interpretation of IEC standards and indemnity coverage. These were all resolved to the satisfaction of the assessment team.

19. RECOMMENDATION

Based on the initial assessment performed from 14th to 15th December 2010, NCC, Campinas SP, Brazil, is recommended for acceptance in the IECEx System (IECEx 02) as an IECEx Certification Body (ExCB), working with Accepted ExTL DEKRA Certification B.V. according to the scope of the standards listed in this document .

Lead Assessor	Technical Assessor
Heinz Berger	Vijay Varma

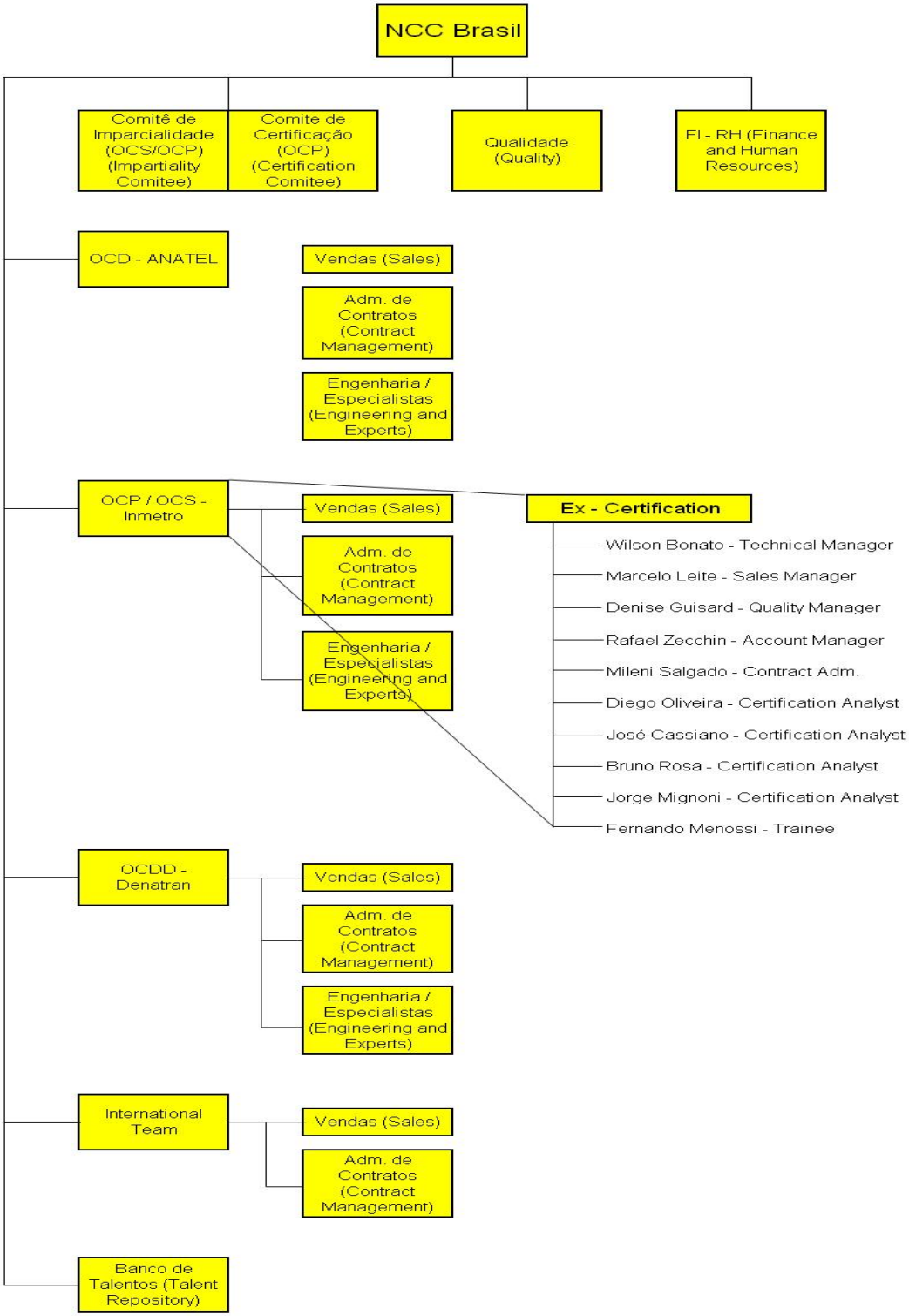
Date: December 15th, 2010

List of Annexes:

Annex 1: Organization Chart of NCC incl. IECEx activities
Annex 2: ISO/IEC Guide 65 Accreditation Certificate for ExCB
Annex 3: ISO/IEC 17021 Accreditation Certificate

ANNEX 1:

NCC Organization Chart - Related to IECEx System and Ex National Certification



ANNEX 2: Accreditation Certificate for Product Certification

República Federativa do Brasil
Ministério do Desenvolvimento, Indústria e Comércio Exterior
Instituto Nacional de Metrologia, Normalização e Qualidade Industrial - Inmetro
Coordenação Geral de Acreditação

Certificado de Acreditação

Acreditação nº. OCP 0034

Número do TCA: 520/2007 **Acreditação Inicial: 16/10/2003**

Associação NCC Certificações do Brasil

Rua Conceição, 233 – Salas 2510/2511 – Shopping Jaraguá Conceição – Campinas - SP

A Coordenação Geral de Acreditação do Inmetro – Cgcre/Inmetro concede acreditação ao Organismo de Certificação acima identificado, no(s) endereço(s) citado(s), segundo os requisitos estabelecidos no ABNT ISO/IEC Guia 65/1997 e na NIT DICOR-024. Esta acreditação constitui a expressão formal do reconhecimento de sua competência para realizar Certificações de Produtos, no escopo constante da Relação de Escopos Acreditados.

Marcos Antônio Lima de Oliveira
Coordenador Geral de Acreditação

Emissão: 08/01/2008 Validade: 15/10/2011

ANNEX 3: ISO/IEC 17021 Accreditation Certificate

República Federativa do Brasil
Ministério do Desenvolvimento, Indústria e Comércio Exterior
Instituto Nacional de Metrologia, Normalização e Qualidade Industrial - Inmetro
Coordenação Geral de Acreditação

Certificado de Acreditação

Acreditação nº. OCS 0033

Número do TCA: **Acreditação Inicial: 20/06/2005**

ASSOCIAÇÃO NCC CERTIFICAÇÕES DO BRASIL

Rua da Conceição, nº 233 - Salas 2510/2511 - Centro - Campinas - SP

A Coordenação Geral de Acreditação do Inmetro – Cgcre/Inmetro concede acreditação ao Organismo de Certificação acima identificado, no(s) endereço(s) citado(s), segundo os requisitos estabelecidos na ABNT NBR ISO/IEC 17021 e na NIT-DICOR 008. Esta acreditação constitui a expressão formal do reconhecimento de sua competência para realizar Certificações de Sistemas de Gestão da Qualidade, conforme a NBR ISO 9001, nos escopos constantes da Relação de Escopos Acreditados.

Aldoney Freire Costa
Coordenador Geral de Acreditação Substituto

Emissão: 30/11/2009 Validade: 19/06/2013