



DAELIM BELEFIC

# DAELIM PROJECT IN CANADA

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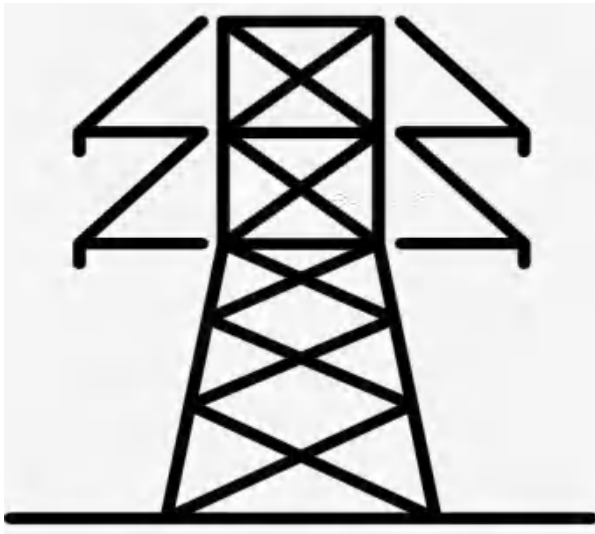
**08.**

About DAELIM

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# 01. Customer Background

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1. **Professional**
2. **Experienced**
3. **Tech-ish**
4. **Teambased**

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# An Overview

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The customer has more than 20 years of experience in the Canadian power industry, specializing in the design and manufacture of power transmission, distribution and substations, as well as suppliers of high and medium voltage equipment.



# CUSTOMER CONCERNS:

For this new customers, when they contact new suppliers, they will have many concerns. DAELIM eliminates customer these concerns through professional team communication.

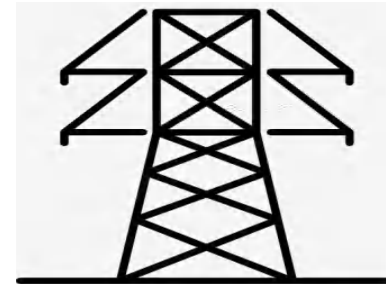


## 1.The supplier is a manufacturer?

DAELIM: We are a professional IEC,ANSI/IEEE, CSA and AS standard transformer manufacturers. We accept any third party to audit factory.

## 2.They can provide faster delivery time than our previously supplier?

DAELIM: For normal transformers, our standard production time is 4-6 weeks, for customized transformer, our fastest production time is 6-8 weeks.



## 3.They can meet the T&D or products requirements?

DAELIM: We have a professional tech and production team. Our team can do transformer customized design and production as per customer requests.

## 4.They can meet our countries standard?

DAELIM: Our engineering team consists of many experienced experts. They are very professional and familiar with international standards.

## 5.How about their transformers price?

DAELIM: Because our factory located in the transformer base in China, we have well raw material supply chain. So we can always provide the competitive price to our customers.

## 6.They have experience in my country?

DAELIM: We are exported more than 30 countries around the world. And we are happy share our project case for our customer reference.

# 02.

# Project Case 1

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# Pole mounted and pad mounted transformers project

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Location: Montreal, Canada

Quantities: 357 sets

Description: Pole mounted up to 167kva and Pad mounted up to 1000kva

## The challenge:



ITEMS

This project has 357 transformers, a total of 20 different items. DAELIM need detailed design for each items. Daelim was asked to provide production drawings within three weeks.



DELIVERY TIME

Due to the project needs of end users, the production time of transformer is only 90 days. But DAELIM 's production line is full at that time because other customers order.



CUSTOMIZED

The single-phase transformer needs to meet the standards of CSA 2.1 and CSA 2.2, pad mounted transformer needs to meet the standards of CSA 227.4, and the design of transformer parts and marks of transformers need to customize production.

# DAELIM SOLUTIONS:

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Understanding our customer needs allows us to make critical must-be-made decisions directly related to their needs.

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## 1. Fast submit the drawing

In order not to affect the delivery time, DAELIM engineer team delivered the drawings in batches. 60% of the drawings were delivered within two weeks and production was arranged in time. The remaining drawings were successfully delivered in the remaining two weeks.

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## 2. Make a good production plan

DAELIM's management pay much attention to the needs of customers, and has communicated with the production team and our supplier team for many times. The workers worked overtime to ensure the delivery of the customer requests.

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## 3. 100% meet the standard requirements

Our team of engineers studied the CSA Standard carefully. Because they are based on IEEE standard, DAELIM designed and produced them according to it. For the existing technical problems or difference, our team has carried out hundreds of e-mail and telephone communication with customers.

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# TRANSFORMER PICTURES

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Through the efforts of the whole team, we completed the production on time within 90 days.





# TRANSFORMER TESTING



1. Ratio, Polarity, and Phase Relation
2. Resistance
3. Applied Potential
4. Induced Potential
5. Loss Test
6. Leak Test
7. Operation tests of all devices

When finish the production, DAELIM did above FAT tests for each transformer one by one, and submit the testing report in time.





# TRANSFORMER PACKING AND SHIPPING

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For single phase transformer, we used the wooden frame structure for the capacity up to 50kva, so it will save space and sea shipping cost.

For pad mounted transformer, we used the wooden pallet packing design, the customers can easy to take out the pad mount transformer from container.





# TRANSFORMER INSTALLATION

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Finally, after three months of production and one month of shipping, 357 sets transformers finally reached the customer's location. Relevant tests were carried out before the customer put into operation, and all the transformers produced by DAELIM met the technical requirements of the customer.



# 03. Project Case 2

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## The challenge:

### Three phase small substation transformer Project

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This small substation transformer need approved by CSA certification.



All the accessories need keep high quality and from well-known brand.



This is a replacement project, the old transformer was ONAN type, now customer need ONAF type to meet their requirements.

Location: Montreal,Canada

Quantities: 3 sets

Description: 44/12.47KV  
5/6.667MVA

# DAELIM SOLUTIONS:

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An experienced and efficient communication engineer, purchasing and sales team to connect with customers.

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## 1. Professional communication

From transformer design to production, DAELIM's engineers and experts and CSA team have repeatedly communicated with each other on the requirements of transformer standards, parameters and accessories to ensure that they meet the requirements of CSA.

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## 2. International accessories supply chain

DAELIM procurement team, taking advantage of its own supply chain, actively contacted our well-known accessories suppliers all over the world, worked with them to overcome the difficulties of epidemic situation, and ensured the smooth delivery and production of overseas accessories.

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## 3. Advice, Expertise and High-Level Assistance

Although the customer's needs change again and again, DAELIM always gives patient answers and corresponding solutions. On the basis of maintaining the original transformer size, DAELIM upgraded the transformer to onan / ONAF type, and maintained low loss, thus saving the use cost of customers.

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# TRANSFORMER PICTURES

For this three 5mva small substation transformer, it designed and produced by CSA C88-16, ANSI/IEEE C57.12.00 and ANSI/IEEE C57.90 standard. All the guages and accessories are from well-known brand, like ABB, Qualitrol and CAPT Italy.







# TRANSFORMER TESTING

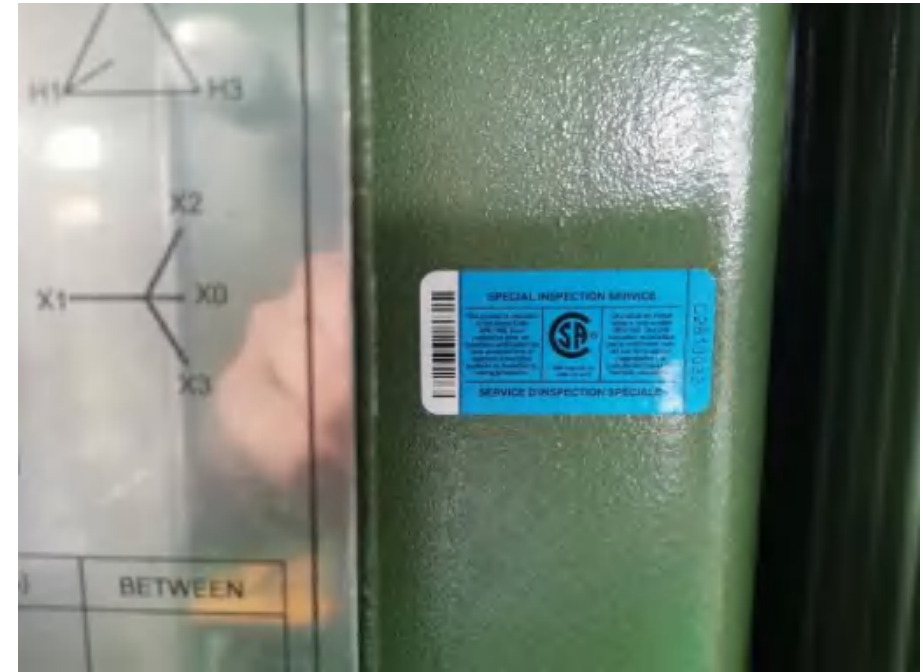
1. Ratio, polarity and phase relation tests
2. Winding resistance measurement tests
3. Insulation power factor
4. Full wave and reduced wave impulse test
5. Applied and Induced potential tests
6. No-Load losses at rated current
7. Total losses at rated current
8. Percent impedance at rated current
9. DGA test
10. Leak test
11. Control cabinet test

DAELIM completed all the FAT and special tests under the inspection of the CSA team.





# TRANSFORMER CERTIFICATION



DAELIM transformer and all accessories met the requirements of CSA. Under the supervision of CSA team, DAELIM passed all the test contents and obtained the CSA certificate.



## Technical Information Service Report

TIS Report: 80040711  
Date: January 26, 2021

**CLIENT:** BEIJING DAELIM GREEN EP TECH CO., LTD.  
No.4 Business Building-2707y,China Central Place,  
Chaoyang District  
Beijing,  
China

Attention: Mark Xiao

Issued by: Mark Xin

**SUBJECT:** Field evaluation of THREE PHASE POWER TRANSFORMER

### APPLICABLE REQUIREMENTS:

CSA C88-16	- Power transformers and reactors
IEEE C57.12.00-2015	- IEEE Standard for General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers
IEEE C57.12.90-2015	- IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers



# TRANSFORMER SHIPPING



For the shipping of this three 5mva transformers, DAELIM use the frame container. It not need remove the radiator and bushings, the customer can install it directly when the transformer at the location. It help our customer save other extral assembling service cost.



# TRANSFORMER SITE TESTING

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DAELIM actively assist with customers to complete the site test work, and all the data were consistent with the factory test data. Three small substation transformers were successfully put into operation.



# 04. Project Case 3

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## Single phase pad mounted transformer project

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Location: Alberta, Canada

Quantities: 80 units

Description: 14.4kV/0.24(0.12)KV  
37.5kVA

## The challenge:

SPECIAL  
REQUIREMENTS

Pentahead bolts need to be stainless steel, tank color is customized by client, different temperature rise and marks requirements.

CUSTOMIZED  
DESIGN

Client has his own technical requirements for transformers, so this order is completely customized, including the dimensions, accessories, and temperature rise.

UTILITY LEVEL  
SERVICE

This client is a local Utility, so designing ability, products' quality, after-sales service and reference are all important for them.

## DAELIM SOLUTIONS:

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Complicated designing, good quality and service will be guaranteed by an expert team

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### 1. Efficient detail confirmation

In order to 100% meet client's special needs, we efficiently confirmed technical details with clients one by one. From the main technical information to transformer parts material and even the dimension, all technical details were confirmed within 3 days.

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### 2. Professional drawing design to meet special needs.

After confirming all the technical specs, DAELIM's engineers paid attention to the design, and revised and submitted the drawing according to client's needs within 2 weeks. Finally, this client recognized our designing ability and placed the purchasing order.

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### 3. Offering services with partners

We strictly produced the transformers to meet the Utility high level quality requirements. And we worked with our Canadian partners together to offer the high quality transformers and after-sales service.

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# TRANSFORMER PICTURES

For this single phase 37.5kva pad mounted transformer, it designed and produced by CSA C227.3, bolts are stainless steel material, oil tanks are seafoam green color, winding temperature rise is 55°C.







# TRANSFORMER TESTING

1. Ratio, Polarity, and Phase Relation
2. Resistance
3. Applied Potential
4. Induced Potential
5. Loss Test
6. Leak Test
7. Operation tests of all devices

When finish the production, DAELIM did above FAT tests for each transformer one by one, and submit the testing report in time.





# TRANSFORMER PACKING AND SHIPPING

For single phase pad mounted transformer, we used the wooden frame structure and pallet to save space and freight.



# 05. Project Case 4

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## The challenge:

### Three phase small substation transformer project

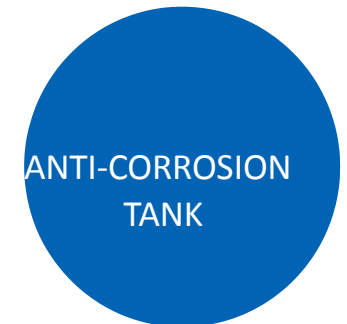
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As a replacement project, short delivery time is very important for the client



This project is used in hospital, need highly customized and high level quality transformer



Project location is in a coast city, so customer need a C5 class anti-corrosion tank

Location: A hospital on the Canadian coast

Quantities: 2 units

Description: 2000kVA 34.5kV&7.2kV

# DAELIM SOLUTIONS:

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Analyzing customers' requirements, responding quickly and proposing solutions are the basic duty for us.

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## 1. Efficient communication

After receiving the customer's purchasing order, according to the project plan, our engineer team conducted in-depth communication with the customer to understand the design requirements, and completed the customer's customized design requirements efficiently.

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## 2. Anti-corrosion paint

In terms of anti-corrosion of the tank, we have specially made anti-corrosion paint, and the average thickness of the paint reached more than 200um.

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## 3. On-time delivery

DAELIM paid attention to client's lead time requirements, The entire procurement and delivery plan has also been completed as promised.

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# TRANSFORMER PICTURES

For this 2000kVA, customer need C5 class anti-corrosion tank, HV and LV flange, and accessories indicate metal label.





# TRANSFORMER TESTING

1. Ratio, polarity and phase relation tests
2. Winding resistance measurement tests
3. Insulation power factor
4. Full wave and reduced wave impulse test
5. Applied and Induced potential tests
6. No-Load losses at rated current
7. Total losses at rated current
8. Percent impedance at rated current
9. DGA test
10. Leak test
11. Control cabinet test





# TRANSFORMER PACKING AND SHIPPING

For 2000kVA small substation transformer, we packed with wooden cases and delivered them by 40 ft container. And offered reinforced protection for vulnerable parts.





# 06. Project Case 5

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## The challenge:

### Power transformer Project

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SPECIAL  
APPLICATIONS

Need to step down 66kV to 12.47kV, then connect to 4 units 3mva pad mounted transformer to supply power for crypto mining machines

ACCESSORIES

Some of the accessories need to be explosion-proof, and customer have special requirements of gauges and valves

FAST ACTION

Customer need we submit drawings quickly and a very short delivery time

Location: British Columbia,Canada

Quantities: 3 units

Description:12MVA 66kV/12.47kV

# DAELIM SOLUTIONS:

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Analyzing customers' requirements, responding quickly and proposing solutions are the basic duty for us.

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## 1. Offering solutions for special application

After receiving the customer's description of project details, our sales team and engineer team offered many referential solutions through careful analysis. Finally, the customer choosed 3 unit 12MVA power transformer to meet the crypto mining machine requirements.

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## 2. International accessories supply chain

DAELIM procurement department try hard to contacted with many well-known accessories suppliers to find high quality gauges and valves to meet client's needs. We worked together to ensure all the accessories can meet client's needs and in good condition before installing on transformers

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## 3. Carefully arranging the production plan

DAELIM paid attention to client's lead time requirements, sales team, procurement team and production team all worked hard to ensure on-time delivery.

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# TRANSFORMER PICTURES

For this 12MVA power transformer, the wireway need to be explosion-proof, gauges with contacts, and need control box for LV side.





# TRANSFORMER TESTING

1. Ratio, polarity and phase relation tests
2. Winding resistance measurement tests
3. Insulation power factor
4. Full wave and reduced wave impulse test
5. Applied and Induced potential tests
6. No-Load losses at rated current
7. Total losses at rated current
8. Percent impedance at rated current
9. DGA test
10. Leak test
11. Control cabinet test





# TRANSFORMER PACKING AND SHIPPING

For 12MVA 66kV power transformer, we arranged open top container and other detachable parts were shipped by 20 ft container.



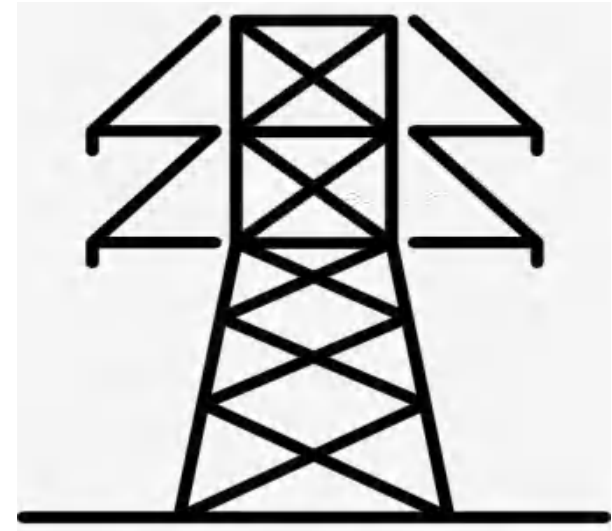
# 07. Customer Comments

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# Customer Say:

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## ***Testimonials***

*During 3 years works with Daelim we found that they are a very high-effective team. Both their sales and engineers can speak very good English. Their transformers are super, people are so nice and with professional engineers. I know they must provide you very good transformers and services. Thanks for Daelim team who always give us quick reply and good prices. Hope we two company can gain more markets in the future!*



# 08. About DAELIM

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# DAELIM Introduction

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## 1. **R&D Capabilities:**

*They have strong R&D team and they have more than 20 years of transformer design experience and are familiar with lots of international transformer standards, such as IEC, IEEE / ANSI, CSA, etc. The technical team of DAELIM are experts, electrical engineers, CAD first-class draftsmen, etc. They also use the latest technology, machines and other modern facilities to produce transformers, but meanwhile DAELIM transformers are made of qualified standard materials which meets the standards of world-renowned suppliers through international procurement as well.*

## 2. **Quality Control:**

*Quality is one of the core value of DAELIM. FAT, Type and third party inspection test are provided for quality and they tend to provide the best to its clients that's why they strictly implement the ISO 9001 quality management system.*

## 3. **Company Certifications:**

*ISO 9001:2008 UL/CUL certification CSA certification CESI certification CNAS certification SGS certification*

## 4. **Professional team:**

*The Daelim team is full of experts and professional, this helps them to solve the customers' problems quickly. All the DEALIM team had systematic training and is committed to continuous improvement by the quality guidelines and practices. Their dedicated customer service, product innovation, engineering excellence and strong social & environmental responsibility sense have made them to become a valued & trusted power solutions partner for globe electric industry.*

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# DAELIM Introduction



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- 5. Brand:

- PART 2 - PRODUCTS

- 2.01 ACCEPTABLE MANUFACTURERS:

- A. ABB/Hitachi
    - B. Eaton/Cooper Power Systems.
    - C. Delta Star.
    - D. General Electric.
    - E. Kuhlman.
    - F. Pauwels.
    - G. Square D.
    - H. Virginia Transformer.
    - I. Sunbelt
    - J. Daelim Belefic**





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**Thank you**