

# REPORT ON ORGANIZATIONAL ACTIVITIES 2022



MANAGER:





## MESSAGE FROM THE CHIEF EXECUTIVE OFFICER

2022 marked 20 years of the Brazilian Center of Steel Construction (CBCA), which remains steadfast in its commitment to promoting and fostering the expansion of industrialized steel construction in Brazil through means of initiatives centering on publicity, in addition to offering support for technological development within the sector.

One of the main initiatives implemented in 2022 was the resumption of in-person RoadShows. The theme chosen for this year center on the relationship between steel and modular construction, and nearly 400 individuals participated in five different events held in the cities of Belo Horizonte, Salvador, Curitiba, São Paulo and Fortaleza. In order to guarantee the success of this project, CBCA established several strategic partnerships with similar entities in each of these locations, which made a significant contribution to these events.

It is also important to note that partnerships were formed with the following entities: Brazilian Association of Engineering and Structural Consulting (ABECE), which led to CBCA once again participating in the National Conference for Engineering and Structural Consulting (ENECE); Brazilian Association of Metalworking, Materials and Mining (ABM), which culminated in CBCA's participating in a panel on steel construction at ABM WEEK, as well as the Brazilian Drywall Association, a partner during 2022 RoadShows.

In the case of the partnership formed with the Brazilian Association of Metal Construction (ABCEN), we continue to work in a collaborative manner, with the support of e8 Intelligence, on annual surveys carried out with manufacturers of steel structures, steel paneling, and steel deck and galvanized profiles for use in light steel frame and drywall. Such studies constitute an essential analysis of the Brazilian metal construction market and demonstrate the various opportunities available for development within the construction sector in Brazil.

According to these surveys, for example, production of steel structures in 2021 totaled more than 1 million tons, a 1.7% increase compared to the previous year, which was also the first year of the Covid-19 pandemic. A 37.5% increase in revenue was also observed: the study

identified revenue totaling 14.3 billion reals in 2021 compared to 10.4 billion in 2020, 7.1 billion in 2019, 5.1 billion in 2018 and 4.4 billion in 2017. These data suggest that, over the last 4 years, company revenues have more than tripled.

One of CBCA's key objectives is to disseminate knowledge within academic and professional environments and promote the implementation of best practices in steel construction, in addition to stimulating the exchange of knowledge and the discussion of issues related to the construction sector. The idea to provide online and in-person courses arose as part of efforts to meet these goals through means of an assertive dynamic, attending to those seeking to learn more about industrialized steel construction. Nearly 130 students completed CBCA's online courses in 2022.

With regards to the training pillar, and with the additional objective of maintaining a close relationship with students, it is important to mention the 4th Contest for Engineering Students and the 15th Contest for Architecture Students that CBCA offers to university students from all over Brazil. These competitions provide participants with a unique opportunity to learn and share information. A R\$10,000 prize was awarded to the winner for each initiative, which counted on the participation of more than 200 students.

CBCA has also established connections with teachers, students and construction professionals through means of several events and workshops. In 2022, approximately 2,500 participants attended meetings, conferences, and academic weeks that were provided or supported by CBCA.

CBCA also coordinated the development of two scholarship programs, one of which was dedicated to Scientific Initiation and the other to Master's Degrees and included topics related to steel construction. These studies will be published through means of several scientific events and published on CBCA's website, which was accessed more than 300 thousand times in 2022, surpassing the total number of access for previous year by more than 20 thousand.

MESSAGE FROM  
THE CHIEF EXECUTIVE OFFICER

Within the context of the dissemination of information, it is also important to highlight continued strategic efforts made on social media (Facebook, Instagram, Twitter, YouTube and LinkedIn), with CBCA able to reach more than 38,000 followers on digital platforms, a 5.6% increase in 2022 compared to the previous year. It is also important to note that during the year 42 different press initiatives were implemented, such as releases, annotations and articles, with 209 articles included in printed newspapers, magazines and online portals throughout the country. These efforts represent considerable growth when compared to the previous year, during which 131 articles were published.

With regards to the dissemination of information, Revista Arquitetura & Aço (Architecture and Steel Magazine), which continues to be issued in a digital format, is performing very well across its three annual editions. Six promotional videos were also released on CBCA's YouTube channel, in addition to the publication of specific editions of the SCIENTIFIC JOURNAL – REA, the release of three technical manuals in 2022 (Technical Manual for Steel Paneling (CBCA/ABCEM partnership), Manual for Modular and Simplified Use Construction - ABNT NBR:880) and the Construction Bank, under which 20 works are registered per month. It is also important to highlight Guidelines for Steel Construction, which provides reports on good practices, including for more than 2,000 installations in 2022 alone. Additionally, CBCA has published Brazilian Steel Construction Guidelines, which offers information on companies, services and products through means of a catalog and has been accessed nearly 27,000 times.

Based on expectation from manufacturers of steel structures for 2023 (which were cited in annual surveys), CBCA also believes that Brazil will experience economic growth, given that steel construction can

contribute to advancing civil construction and urgent infrastructure works, particularly with regards to benefits such as sustainability and speed. CBCA believes that steel construction systems can be used to significantly reduce Brazil's housing deficit, raising standards for habitation and quality of life among the Brazilian population, since these systems guarantee increased agility in the execution of projects, in addition to offering the cleanest and safest construction sites. Steel construction also makes it possible to work with large spans, which allows large common areas to be opened up for use by families being served by these projects. Additionally, steel construction systems promote increasingly productive and sustainable growth, allowing for greater freedom in terms of creativity in architectural projects in Brazil.

CBCA will continue to seek to gather its efforts together with national universities and organizations, bringing together representatives from local industry, entities and professionals, seeking to establish synergy and the promotion of the steel construction in the country as part of a single objective.

CBCA will also be paying particular attention to the emergence of new technologies, such as the development of 3D printing, digital tools and metal solutions with a zero carbon impact. The organization believes that an increased use of steel within the construction sector is directly related to the reinitiating business activities and strengthening the Brazilian economy after the challenges faced during recent years, offering a more direct, sustainable, productive, and technologically advanced path towards achieving this goal.



**Eduardo  
Fares  
Zanutti**

*Chief Executive  
Officer*



PROMOTE AND EXPAND  
THE PARTICIPATION OF  
**STEEL CONSTRUCTION**  
WITHIN DOMESTIC  
MARKETS, IMPLEMENTING  
**INITIATIVES AIMED AT THE  
DISSEMINATION OF  
INFORMATION AND  
OFFERING SUPPORT FOR  
TECHNOLOGICAL  
DEVELOPMENT.**





# CONTENTS

## 1. CONSORTIUM MEMBERS | 06

## 2. MANAGEMENT | 07

## 3. HIGHLIGHTS | 08

## 4. STATISTICAL DATA | 10

Interpretation and Publishing of Statistical Data 10

Surveys 11

## 5. INITIATIVES FOR PROMOTION AND PUBLICATION | 12

CBCA's Website

13 Site Map 14

Construction Bank 15

Architecture & Steel Magazine 16

Guidelines for Steel Construction 17

Media 18

CBCA News 18

Press 18

Social Media 19

Promotional Videos 21

CBCA Architecture Contest 22

CBCA Engineering Contest 23

Events and Workshops 24

## 6. PARTNERSHIPS | 25

Exchange with Similar Intern. Organizations 26

National Entities 27

Universities 27

## 7. PROMOTION AND STANDARDIZATION OF QUALITY | 28

## 8. DEVELOPMENT OF TECHNICAL MATERIALS | 30

REA – Steel Structure Magazine 31

Guidelines for Brazilian Steel Construction 32

Steel Construction Manuals 33

## 9. LABOR QUALIFICATIONS | 34

Video Classes 35

Promoting Courses 36

Scholarships 37



# CONSORTIUM MEMBERS

## MANAGEMENT

ArcelorMittal Tubarão  
Gerdau Açominas S.A  
Usiminas

## COLLABORATORS

Aperam  
ArcelorMittal Aços Longos  
ArcelorMittal Sul Fluminense  
Gerdau Aços Longos S.A.  
Vallourec Tubos do Brasil S.A.

## COMPANIES

ALS Comercio e Industria de Ferro e Aço Ltda.

Blat Estruturas Metálicas

Barbieri do Brasil Ind. E Com.

CBMM - Cia. Bras. de Metal. e Mineração

Center Steel Eng. Light Steel Framing

Comercial Gerdau

Grupo Pizzinatto

ISOESTE Construtivos Isotérmicos

Perfinaço

Soluções Usiminas

Tuper

 *New members*



# MANAGEMENT

## Chief Executive Officer

Eduardo Fares Zanotti

## Management Committee

ArcelorMittal Tubarão \_\_\_\_\_ Eduardo Fares Zanotti

Gerdau \_\_\_\_\_ Cesar Obino da Rosa Peres

Usiminas \_\_\_\_\_ Ascânio Merrighi de Figueiredo Silva

Aço Brasil / CBCA \_\_\_\_\_ Debora Oliveira / Alberto Cotrim

## Executive Committee

ArcelorMittal Tubarão \_\_\_\_\_ Alexandre Gama

Gerdau \_\_\_\_\_ Rosane Beviláqua

Usiminas \_\_\_\_\_ Humberto Bellei / Angela Guedes

CBCA \_\_\_\_\_ Rafael Silva

## Executive Management

Superintendent \_\_\_\_\_ Alberto Cotrim

Executive Manager \_\_\_\_\_ Rafael Silva

Marketing and Training Coordinator \_\_\_\_\_ Ricardo Werneck

Technical Advisor \_\_\_\_\_ Isadora Arêas

# HIGHLIGHTS



20 Years  
of CBCA



RoadShow



Simplified  
Use Manual

ABNT NBR:8800





# HIGHLIGHTS



Modular  
Construction  
Manual



Technical Standard  
Light Steel  
Framing

ABNT NBR: 16970:2022



Technical Standard  
Steel Paneling  
with Corrugated  
and Trapezoidal  
Sections

ABNT NBR: 14513:2022





# STATISTICAL DATA

*With growth in revenue of 37.5%, industrialized steel construction companies are optimistic about the emerging scenario within the industry over the coming years*

The Brazilian Center of Steel Construction (CBCA) – an entity managed by the Brazil Steel Institute, in partnership with the Brazilian Association for Metal Construction (ABCEM), finalized editions of annual surveys for 2022 performed together with manufacturers of steel structures. Implemented by e8 inteligência, a company specialized in technical and market research within the construction sector, the studies, which refer to the year 2021, present considerable growth, with an emphasis on increased revenue and job creation.

The research project “Scenario among Steel Structure Manufacturers” includes data on metal structures, electrical transmission towers, wind energy towers, structures used in solar energy park, and metal guardrails. The 334 companies participating in the surveyed scenario produced, in 2021, 1.04 million tons of steel, a 1.7% increase compared to 2020, the first year of the Covid-19 pandemic, with 550.4 thousand tons of production stemming from metal structure works, 462 thousand tons of production for works within the energy sector, and 32.2 thousand tons in the production of metal guardrails.

This amount led to a 37.5% growth in business revenue: the survey identified revenues totaling 14.3 billion reais in 2021, compared to 10.4 billion in 2020, 7.1 billion in 2019, 5.1 billion in 2018 and 4.4 billion in 2017. These data suggest that, over the last 4 years, company revenue has more than tripled. There was also an increase in terms of the number of jobs, with a 0.7% increase in the number of employees,

totaling 31,300 professionals, the highest number seen in the last 5 years. Approximately 36.5% of manufacturers expanded their staff rosters, which reflects an increase in demand.

The survey “Scenario among Steel Paneling and Steel Deck Manufacturers”, which was carried out by CBCA in partnership with ABCEM, analyzed 108 different companies, 88% of which were exclusively active in the production of steel paneling and 9% in the production of steel paneling and steel deck. Within this area, there was a 61.4% growth in terms of company revenue when compared to 2020, which corresponds to approximately 7.1 billion reais. The study “Scenario among Manufacturers of Galvanized Profiles - Light Steel Frame and Drywall” identified total growth of 10.3% (Light Steel Frame) and 7.4% (Drywall) in terms of production when compared to 2020, with an optimistic outlook for the upcoming years. The 35 companies participating in the study earned revenue totaling 1.4 billion reais, an increase of 40.2% compared to the previous year.

## CHALLENGES

During the survey “Scenario among Steel Structure Manufacturers” it was reported that just over 47.7% of the companies surveyed consider improving internal processes to be their biggest internal challenge. Approximately 45.1% of manufacturers report difficulties in maintaining working capital and 34.6% consider a low level of qualifications among their teams as the main bottleneck in processes.

The survey “Scenario among Manufacturers of Steel Paneling and Steel Deck” pointed out that incipient marketing was the main internal difficulty faced by companies, which was cited by 35.2% of respondents. The need to improve the level of qualifications held by teams and technical knowledge are also relevant items, according to 33.4% of manufacturers.

*More than 1 million tons of steel structures were produced in 2021, a 1.7% increase when compared to the previous year, according to research from CBCA and ABCEM*

The survey “Scenario among Manufacturers of Galvanized Profiles - Light Steel Frame and Drywall” suggested that, for 38.5% of galvanized profile manufacturers, poor marketing is the main internal challenge, both in terms of customer acquisition and improving company image and market positioning. The low level of qualifications among teams and the need to improve internal processes were also cited as important areas of improvement by respondents.

Given the scenario presented, it is also important to highlight that throughout all surveys, more than half of the manufacturers were optimistic about the future, stating that 2023 studies, which will reference 2022, will reflect market growth.

Initiatives aimed at improving taxation of steel products in order to optimize competitiveness in the face of competing systems is one of the main challenges for the sector, according to 56.8% of manufacturers.

Each year, research has been improved in terms of methodology, data collection, and efforts to identify new manufacturers. These efforts involve a continuous improvement process, with the objective of presenting a better perspective and consequently helping to direct actions towards improved developments in civil construction.

CBCA and ABCEM believe that such research serves to support the promotion of industrialized steel construction within society, government and the construction market, shedding light on the real importance and dimensions of steel construction.

This research is published on CBCA and ABCEM’s websites.

# STATISTICAL DATA

## SURVEYS

### SCENARIO AMONG STEEL STRUCTURE MANUFACTURERS



In this year's edition, participating steel structure-producing companies together produced approximately 1.04 million tons, with revenues totaling R\$14.3 billion and employed 31,300 individuals in 2021.

Wind and solar energy sectors have seen an increase in production. Plants are the main purchase channel and 69.9% of raw materials were acquired through these means. In terms of company growth, 47.7% of manufacturers state that improving internal processes is the main internal challenge that must be overcome.

In terms of external factors, the cost of raw materials was the main item that affected company growth and was cited by 80.1% of respondents. Initiatives aimed at improving taxation of steel products in order to optimize competitiveness in the face of competing systems is one of the main challenges for the sector, according to 56.8% of manufacturers.

Even in the face of such adversity, approximately 74.4% of manufacturers are optimistic and believe that they will achieve growth in 2022 compared to the previous year. Each year, research has been improved in terms of methodology, data collection, and/or efforts to identify new manufacturers.

### SCENARIO AMONG MANUFACTURERS OF STEEL PANELING & STEEL DECK



In this year's edition, the participating companies that produce steel paneling, enclosure panels and steel deck together produced 497.9 thousand tons, with revenue totaling R\$7.1 billion, and employed approximately 12 thousand individuals in 2021.

From among existing internal challenges in terms of company growth, incipient marketing can be highlighted as a main item, followed by the need to improve qualifications among professionals. In terms of external factors, in 2021 the cost of raw materials was highlighted as an item that hinders growth and was cited by 62% of manufacturers.

Paneling manufacturers are optimistic, with 73% of manufacturers stating that they expect market growth in 2022. In the case of steel deck producers, 53% believe that growth will not occur in 2022. Each year, research has been improved in terms of methodology, data collection, and/or efforts to identify new manufacturers.

These efforts are part of a continuous improvement process aimed at offering improved perspectives of the sector and help direct actions toward increased development within civil construction.

### SCENARIO AMONG MANUFACTURERS OF GALVANIZED PROFILES FOR LIGHT STEEL FRAME & DRYWALL



In this year's edition, companies that are active in the market for Light Steel Frame and Drywall profiles together produced a total of 85,700 tons, with revenue of R\$1.04 billion, and employed 2,300 individuals in 2021.

From the manufacturers' perspective, residential works, particularly those of a medium and high standard, are the most favorable for the use of galvanized profiles, whether such profiles are LSF or Drywall.

In terms of external factors, competition with imported and/or unqualified materials represented a strong impact on business activities and were cited by 61.5% of manufacturers. In order to strengthen development within the sector, manufacturers consider it essential that action be taken to provide the workforce with qualifications, in addition to a more punitive program within the sector and improved product taxation.

75% of manufacturers believe that market growth will occur in 2022 and 25% expect this growth to exceed the levels seen in 2021 by more than 20%. Each year, research has been improved in terms of methodology, data collection, and/or efforts to identify new manufacturers. These efforts are part of a continuous improvement process aimed at offering improved perspectives of the sector and help direct actions toward increased development within civil construction.



# PROMOTION AND PUBLICATION

# INITIATIVES FOR PROMOTION AND PUBLICATION

CBCA WEBSITE

**301,458**

VISITS / YEAR

DESKTOP: 79.95%  
MOBILE: 19.56%  
TABLET: 0.49%

**4,499**

NEW  
REGISTRATIONS



**58,208**

NEW SITE VISITORS

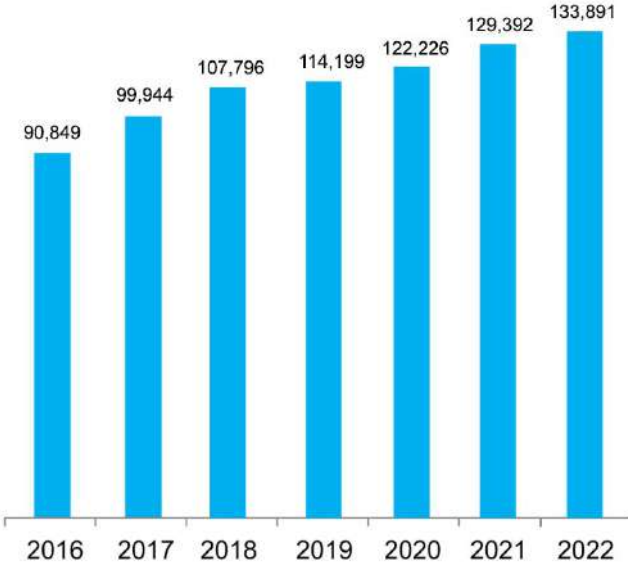
(\*) Site measurements are  
based on Google Analytics

**288,685**

TOTAL PAGE  
VIEWS

AVERAGE SESSION DURATION: 2:19 s

## SITE REGISTRATIONS



## NUMBERS FOR ENGLISH LANGUAGE WEBSITE

New users: 11,712  
Page views: 1,058  
Average session duration:  
0:35 s

## LANGUAGES

PT-BR: 70.43%  
EN-US: 19.89%  
PT-PT: 3.21%  
OTHER: 6.47%



# INITIATIVES FOR PROMOTION AND PUBLICATION

SITE VISITS | SITE MAP

**301,458**

**2022**

Record: 32,900 (APR)  
1,096.7 / day

**277,367**

**2021**

Record: 32,900 (APR)  
1,967 0.7 / day

**267,053**

**2020**

Record: 27,614 (JUL)  
920.5 / day

**207,183**

**2019**

Record: 26,430 (NOV)



- **TRAINING**

ONLINE COURSES  
IN-PERSON COURSES  
COMPETITIONS  
ROADSHOWS  
WEBINARS  
VIDEO LESSONS  
MASTERCLASS  
SCHOLARSHIPS

- **INSTITUTIONAL**

CBCA  
PARTNER ENTITIES  
REPORT ON  
CONSORTIUM ACTIVITIES

- **LIBRARY A&S**

- **MAGAZINES**

- **NEWS**

- **AGENDA CBCA**

- **BENEFITS**

- **CONTACT US**

# INITIATIVES FOR PROMOTION AND PUBLICATION

## CONSTRUCTION BANK

**1,418**

NEW USERS

**22,695**

VISITS

**240**

NEW REGISTERED WORKS

**14,567**

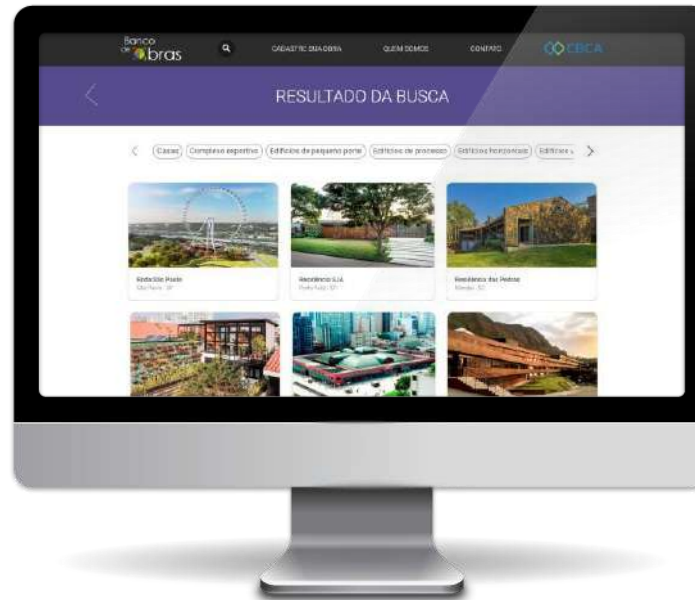
PROFESSIONALS  
(ARCHITECTS AND ENGINEERS)

**22,328**

PAGE VIEWS

**04:44s**

AVERAGE SESSION DURATION



Integration into Guidelines for  
Brazilian Steel Construction  
through means of a link provided to  
suppliers registered under works.

Steel construction is becoming increasingly prevalent in Brazil.

In order to catalog and assemble data on steel works in Brazil, CBCA has created the Construction Bank - a system used to index works by type, categories of use, designers, and manufacturers of structures.

The Construction Bank aims to highlight the production chain for steel construction in addition to serving as a bank for ideas and construction processes.

- > Building type
- > Category of use
- > Architecture
- > Structural engineering
- > Manufacturers of structures

*The Construction Bank is available as part of a responsive web design for Smartphone and Tablet (IOS and Android)*

# INITIATIVES FOR PROMOTION AND PUBLICATION

## ARCHITECTURE & STEEL MAGAZINE PUBLICATIONS



ISSUE No. 63

**26,047**

NUMBER OF TIMES VIRTUAL  
MAGAZINE ACCESSED

**17,922**

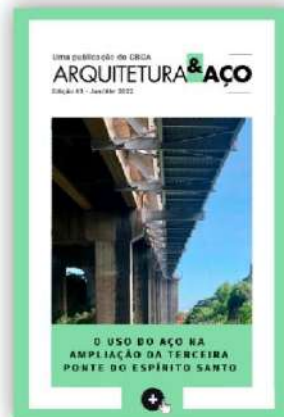
NEW USERS

**3,004**

MAY - MONTH WITH HIGHEST  
NUMBER OF ACCESSES



ISSUE No. 62



ISSUE No. 61

**15,024**

NUMBER OF VISITS TO  
MAGAZINES (ISSUES  
RELEASED UP UNTIL  
2018)

**353**

VIEWS RECEIVED BY ARTICLES  
AND TECHNICAL ANNOTATIONS

**24,780**

ITE NEWS: VIEWS



# INITIATIVES FOR PROMOTION AND PUBLICATION

## STEEL CONSTRUCTION GUIDELINES

Released in September/19, this application seeks to offer guidance to investors, builders, architects, engineers, manufacturers, assemblers, and final customers with regards to best practices in steel construction, offering minimum recommended criteria, from the design stage to project execution, manufacture, transport and assembly of structures and interfaces.

Through means of an interactive and self-instructive checklist, professionals are able to access each of the available tabs (Management, Architecture, Structure, Manufacturing, Logistics and Assembly and Passive Protection), in order to better understand which actions must be taken to ensure that their project is executed at a high level of excellence.

The practices recommended under these Guidelines are intended to offer orientations, and those responsible for projects must define which strategies will be applied in each specific project context.



**01:48 s**

AVERAGE TIME SPENT NAVIGATING PAGE

**2,415**

PAGE VIEWS

ANDROID

**178**

TOTAL INSTALLATIONS COMPLETED

IOS

**69**

TOTAL NUMBER OF INSTALLATIONS

**2,415**

INSTALLATIONS ONTO ACTIVE DEVICES

# INITIATIVES FOR PROMOTION AND PUBLICATION

## MEDIA

### CBCA NEWS

Created in 2010 and issued on a weekly basis.



86,326  
VIEWS

### PRESS

In 2022 42 different press initiatives were implemented, such as releases, annotations, and articles, with 209 articles included in printed newspapers, magazines and online portals throughout the country.

Advertising value equivalency: estimate of amounts that would be spent if the content published through these communications vehicles were charged in the form of an advertisement. Advertising value equivalency at CBCA in 2022 totaled R\$970,701.61. This amount is calculated based on the press vehicle's relevance, number of hits received by the site, newspaper circulation, among other factors.

Featured Newspapers: Valor Econômico, O Globo, Terra, O Estado de Minas, Casa e Jardim, ArchDaily.

Releases: 42

Materials Published: 209

Advertising value equivalency: R\$ 970,701.61



# INITIATIVES FOR PROMOTION AND PUBLICATION

## SOCIAL MEDIA

### General Information



#### Reach

**9.12 MI**

-14%  
when compared to 2021  
(accumulation JAN/DEC)

#### Impressions

**11.82 MI**

-51%  
when compared to 2021  
(accumulation JAN/DEC)

#### Followers

**38.1K**

+ 5.6%  
when compared to 2021  
(accumulation JAN/DEC)

#### Interactions

**758.2K**

-14%  
when compared to 2021  
(accumulation JAN/DEC)

**44,094**

**5,101**

**2,058**

**5.65MI**

**6.29 MI**

**18,780**

**46,456**

**3.47MI**

**4.77 MI**

**9,178**

**4,887**

**582.1K**

**1,980**

**3,080**

**151.7K**

**3,070**

**701,730**



# INITIATIVES FOR PROMOTION AND PUBLICATION

## SOCIAL MEDIA

**BEST**  
Performance



# INITIATIVES FOR PROMOTION AND PUBLICATION

PROMOTIONAL VIDEOS



**140,655**  
VIEWS

**185**  
VIEWS  
WEBSITE



**3,070** PAGE FOLLOWERS

**SÃO PAULO, MINAS GERAIS E BAHIA** STATES WITH HIGHEST NUMBER OF VIEWS

**28.7%** of target audience between **25 and 34 years** of age  
66.5% Men 33.5% Women



**6** platform publications

**701,730K** TOTAL INTERACTIONS

DATA ON DEVELOPMENT OF SUBSCRIBERS



Even with a reduction in terms of investment due to factors related to payments made as part of the Boost process, metrics for “Followers” and “Interactions” presented growth when compared to 2021. YouTube views, for example, increased by 200% in the final quarter of 2022 alone when compared to previous months.



CBCA 20 ANOS



Transformadores da Construção -



Transformadores da Construção -



Transformadores da Construção -

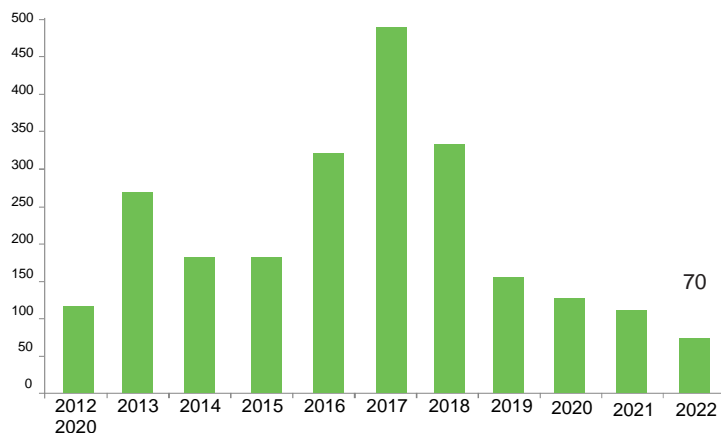
# INITIATIVES FOR PROMOTION AND PUBLICATION

## CONTEST FOR ARCHITECTURE STUDENTS

### Theme: Industry, Innovation and Infrastructure

In 2022, 70 teams representing 13 Brazilian states (SP, RJ, MG, PR, RS, CE, BA, GO, PE, RN, SC, AM and TO) and 33 Faculties of Architecture participated in the competition. The proposals received were evaluated and 36 applicants were selected for final assessment.

### DEVELOPMENT OF PARTICIPATION IN COMPETITION



### Winners

#### 1st Place

FCT-UNESP – Faculty of Sciences and Technology

#### 2nd Place

Federal University of Amazonas

#### 3rd Place

Federal University of Rio Grande do Norte

#### Honorable Mention I

University of São Paulo – Institute of Architecture and Urbanism

#### Honorable Mention II

Federal University of Rio Grande do Norte



Project declared winner of the competition's 2022 edition.

**31,981**  
VISITS DURING THE YEAR

**29,051**  
VIEWS

**70**  
TEAMS REGISTERED



# INITIATIVES FOR PROMOTION AND PUBLICATION

## CONTEST FOR ENGINEERING STUDENTS

### Theme: MODULAR CONSTRUCTION CONCEPTS IN A COMMERCIAL BUILDING CONSISTING OF A STEEL STRUCTURE

On September 27, 2022, a remote meeting of the Judging Committee was held in order to evaluate works related to the CBCA's 4th Contest for Engineering Students.

Initial comments from the committee were related to the number of works received, which was lower than in previous editions of the contest. The members of the Judging Committee associated this drop in participation to the resumption of in-person activities after two years without typical interactions involved in in-person academic activities due to the Covid-19 pandemic. This hypothesis was corroborated by representatives from academia that are part of the Judging Committee, who offered testimonies regarding some of the characteristics observed during the first academic semester of 2022. This context - tied to the reduced number of works - only serves to reinforce the importance of CBCA's 4th Competition for Engineering students – 2022, which should be viewed as an excellent incentive for students' returning to in-person interactions. These interactions are essential to their development and the implementation of quality projects.

**9,280**

VISITS DURING THE YEAR

**5,996**

VIEWS

**01:30 s**

AVERAGE SESSION DURATION

### Winners

#### 1st Place

Mauá Institute of Technology

#### Honorable Mention

Federal University of Lavras



# INITIATIVES FOR PROMOTION AND PUBLICATION

## EVENTS & WORKSHOPS

### SPONSORED / SUPPORTED

ENER NNE - NATIONAL ENGINEERING CONFERENCE FOR NORTH-NORTHEASTERN BRAZIL - Workshop: Steel Structural Systems - 150 people

ENER - NATIONAL ENGINEERING CONFERENCE FOR BRAZIL'S SOUTH/SOUTHEAST/CENTER WEST REGIONS  
- Lecture: Steel Structural Systems - 400 people

ENEC SALVADOR - NATIONAL CIVIL ENGINEERING CONFERENCE - Workshop: Steel construction systems: the study of cold-formed profiles - 142 people

XII UFC CIVIL ENGINEERING WEEK  
- Workshop: Steel Structures – Designs, Specifications and Corrosion Protection - 40 people

AWARD CEREMONY FOR 15th ARCHITECTURAL CONTEST - 35 people

22nd INTEGRATED CEATEC WEEK - PUC-CAMPINAS - Workshop: BIM and management of steel structure projects - 40 people

OFFSITE CONSTRUCTION EXPO – Workshop CBCA + CBCA Booth - 200 people

ABPP - Brazilian Passive Structural Protection Association - 180 people

MODULAR SUMMIT - 200 people

ENECE - National Conference for Engineering and Structural Consulting - 352 people

CBPE – Brazilian Congress for Bridges and Structures - 230 people

Congress for Steel Frame and Industrialized Systems - 500 people



**2,469**  
PARTICIPANTS





**PARTNERSHIPS**



# PARTNERSHIPS

## EXCHANGE WITH SIMILAR ORGANIZATIONS



### **worldsteel Association**

- Initiatives implemented together in order to promote steel construction.



### **A L A C E R O – Latin American Steel Association**

- Provision of support, in the capacity of Technical Secretary, for the implementation of initiatives from CODUA (Development Committee for the Use of Steel).
- Coordination of Brazilian participation in ALACERO's 11th Steel Design Competition for Architecture Students 2018.



# PARTNERSHIPS

## NATIONAL ENTITIES & UNIVERSITIES

### NATIONAL ENTITIES

ABCEM - Brazilian Association for Metal Construction

ABINOX - Brazilian Stainless Steel Association

ABECE - Brazilian Association for Engineering and Structural Consulting

ABENC - Brazilian Association of Civil Engineers - BA

ABM – Brazilian Association of Metalworking, Materials and Mining

ABNT - Brazilian Technical Standards Association

ABRAMAT - Brazilian Association for the Construction Materials Industry

AsBEA – Brazilian Association for Architectural Firms - CE, BA, MG

DRYWALL ASSOCIATION - Brazilian Drywall Association

CAU - Council for Architecture and Urbanism - CE, PR, MG, SP, BA

CREA - Regional Councils for Engineering and Agronomy - CE, BA, SP, MG,

FIRJAN - Industrial Federation for the State of Rio de Janeiro

ICZ - Institute for Non-Ferrous Metals

INDA – National Steel Distributors’ Institute

SICEPOT - - Union for the Heavy Construction Industry - MG

SINAENCO - National Union for consultative engineering and architecture companies - CE and SP

SINDUSCO - Union for Construction and Furnishing Industries - BA, MG, SP, PR and CE

### UNIVERSITIES

FUMEC

FURG - Federal University of Rio Grande

IFCE – Federal Institute of Ceará

IMT – Mauá Institute of Technology

Newton Paiva

PUC-Campinas – Pontifical Catholic University of Campinas

PUC-Minas – Pontifical Catholic University of Minas Gerais

PUC-PR – Pontifical Catholic University of Paraná

PUC-Rio – Pontifical Catholic University of Rio de Janeiro

UENF – Northern Rio de Janeiro State University

UFAM – Federal University of Amazonas

UFBA – Federal University of Bahia

UFC – Federal University of Ceará

UFES – Federal University of Espírito Santo

UFLA – Federal University of Lavras

UFMG – Federal University of Minas Gerais

UFPR – Federal University of Paraná

UFRJ – Federal University of Rio de Janeiro

UFRN – Federal University of Rio Grande do Norte

UFSJ - Federal University of São João del-Rei

UFTPR – Federal Technological University of Paraná

UFVJM – Federal University of the Jequitinhonha and Mucuri Valleys

Unesp – Paulista State University

Uni-BH

UNIFACS

UNIFAMETER

UNIFOR

UNIJORGE

Catholic University of Bahia

Positivo University

Mackenzie Presbyterian University

USP – University of São Paulo



# PROMOTION & STANDARDIZATION OF QUALITY



# PROMOTION AND STANDARDIZATION OF QUALITY TECHNICAL STANDARDS

CE-02:125.004 – Commission for the Study of Light Steel Framing Construction Systems Standard finalized and published.

ABNT NBR 8800:2008 (revision)  
Standard subject to public consultation.

ABNT NBR 14513 – Steel paneling lined with corrugated sections and ABNT NBR 14514 – Steel paneling lined with trapezoidal sections (revision)  
Standard finalized and published.

CE-028:001.004 – Commission for the Study of Welded and Cold Formed Profiles (review)  
Standard currently under development.

CE-002:122.016 - Wind-related forces in buildings for revision - NBR 6123  
Standard currently under development.

GT - NBR 16690:2019 - Meeting of the Commission for Photovoltaic Power  
Standard currently under development.

ABNT NBR: 16421:2015 – Paneling - Collaborative steel forms in mixed steel and concrete slabs – requirements and testing.

CEE-231 – Special design committee for the study of metal, wood, concrete and mixed structures and inspection of wood and mixed metal structures – Base Text for new Standard.





# DEVELOPMENT OF TECHNICAL MATERIALS

# DEVELOPMENT OF TECHNICAL MATERIALS

## STEEL STRUCTURE MAGAZINE - REA

The magazine, which is supported by CBCA, offers a space for professionals to present their scientific articles or technical annotations for topics related to steel structures and mixed steel-concrete structures.

The publication, which is scientific in nature, relies on an active independent editorial board for the evaluation of articles. The magazine's 11th volume, which contains three editions with a total of 13 articles, was published with participation from researchers in Brazil and Portugal. All articles receive a DOI (\*).

DOI is an acronym for Digital Object Identifier. DOI is a standard used to identify documents within digital networks.



**5,334**  
NUMBER OF  
TIMES  
ACCESSED

Devices:  
Desktop: 80.87%  
Mobile: 18.78%  
Tablet: 0.35%

**4,572**  
VIEWS

**2,282**

NEW USERS



# DEVELOPMENT OF TECHNICAL MATERIALS

## BRAZILIAN STEEL CONSTRUCTION GUIDELINES

Brazilian Steel Construction Guidelines are a pioneering initiative from the Brazilian Center of Steel Construction - CBCA, implemented with support from the Brazilian Association for Metal Construction - ABCEM and seeking to encourage growth within the sector. These guidelines are used to map out and disseminate information on the production chain used in steel construction, facilitating consumer access to the different products, services and solutions available on the market.

The Guide is consistently updated in order to broaden its scope, incorporating new market segments for steel construction and participants.

**26,332**

NUMBER OF TIMES  
ACCESSED

**1,620**

DOWNLOADS

**23,368**

VIEWS

**940**

PARTICIPANT  
COMPANIES

**11,032**

NEW USERS

**11**

NEW REGISTRATIONS

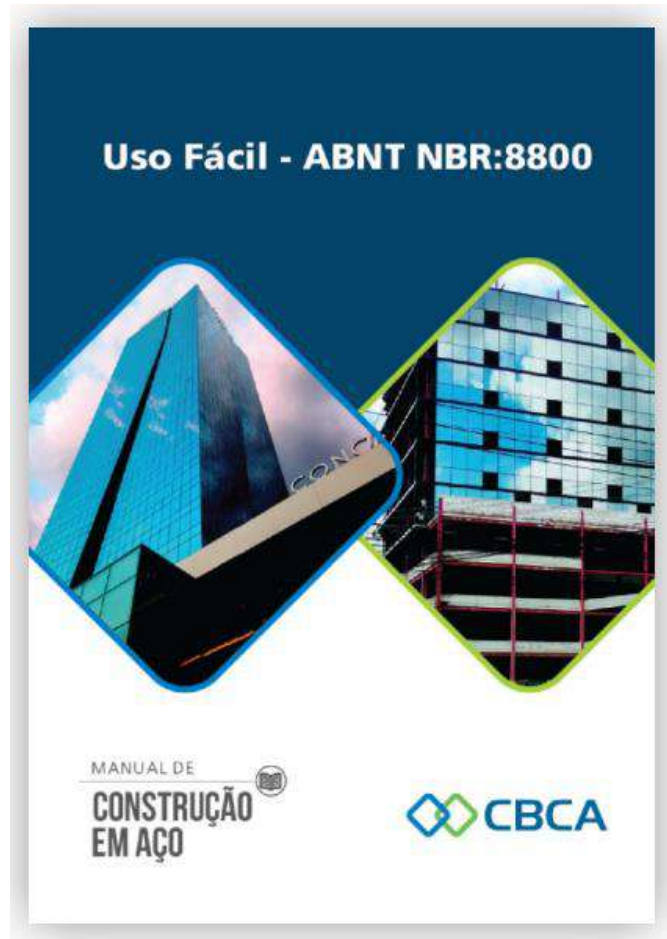
The Guide is *available* as part of a responsive web design for Smartphone and Tablet ((IOS e Android).





# DEVELOPMENT OF TECHNICAL MATERIALS

## STEEL CONSTRUCTION MANUALS



**30,165**

NUMBER OF MANUAL  
DOWNLOADS

**111,177**

NUMBER OF TIMES  
MANUALS ACCESSED

### Manuals Completed in 2022:

- Technical Manual for Steel Paneling (partnership between CBCA/ABCEM)
- Modular Construction
- Simplified Use - ABNT NBR:8800

### Editions Scheduled for 2023:

- Fire Protection Manual (review and updating)
- Manual for Building Facades (new)



# LABOR QUALIFICATIONS

# LABOR QUALIFICATIONS

## VIDEO LESSONS

CHARACTERISTICS OF STEEL CONSTRUCTION

ECONOMIC FEASIBILITY IN STEEL STRUCTURES

TYPES OF PROFILES

CONNECTIONS

TRANSPORT AND MAINTENANCE IN STEEL

STRUCTURES BUILDING FIRE SAFETY

CORROSION PROTECTION

STRUCTURAL STEEL

STRUCTURAL DESIGN  
EXTERNAL SEALING AND SLABS



MOST DOWNLOADED  
VIDEO LESSON

**CHARACTERISTICS OF  
STEEL CONSTRUCTION**

**209**  
NUMBER OF TIMES  
ACCESSED

**2,012**  
NUMBER OF  
TIMES ACCESSED

**1,572**  
DOWNLOADS

**2,822**  
PAGE VIEWS

# LABOR QUALIFICATIONS

## PROVISION OF COURSES

### ONLINE COURSES

INTRODUCTION TO STEEL  
CONSTRUCTION

EXECUTION OF STEEL  
STRUCTURES

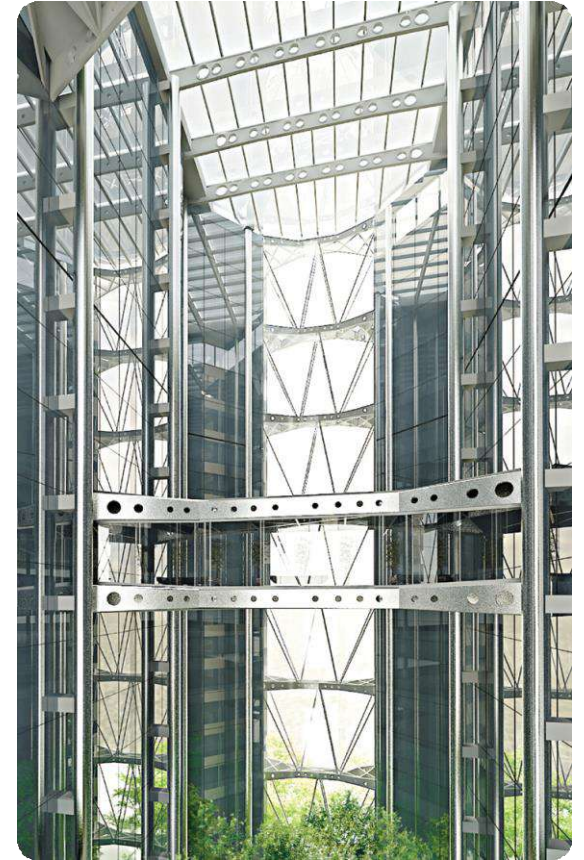
STEEL STRUCTURAL  
SYSTEMS

LIGHT STEEL FRAMING (NEW)

SIZING STEEL  
STRUCTURES

**124**

STUDENTS HAVE COMPLETED  
ONLINE COURSES







# LABOR QUALIFICATIONS SCHOLARSHIPS

## SCHOLARSHIP FOR SCIENTIFIC INITIATION

The scholarship provided by UFES, which was developed during 2022, was finalized with the delivery of a final report and EASI software - Steel Structures during Fire Events. In 2022, a new selection process was also carried out, through which five research proposals were received and the work performed by UFAM – Federal University of Amazonas was selected as winner of the competitive process, with the theme: “Thermal performance in buildings built using the Light Steel Frame method in the Amazonian context”. The project will be developed throughout 2023 and is expected to be delivered in January 2024.

## SCHOLARSHIP FOR MASTER’S DEGREE PROGRAM

Thayná Marcelino, a student at the Federal University of Espírito Santo (UFES), with guidance from the professors Fernanda Calenzani and Macksuel Soares, was awarded CBCA’s master’s degree scholarship in 2021/22. Standard progress is being made in the course and the student is submitting work reports, which are receiving positive evaluations. Delivery of the work entitled “Analysis and dimensioning of fire-resistant coating materials in steel structures”, is scheduled for February 2023.

[www.cbca-acobrasil.org.br](http://www.cbca-acobrasil.org.br)



Brazilian Center of Steel Construction

# REPORT ON ORGANIZATIONAL ACTIVITIES 2022

MANAGER:

