



REPORT
ACTIVITIES
2021



MANAGER:





MESSAGE FROM THE CEO

Despite significant advances in vaccination, 2021 was still marked by the Covid-19 pandemic. Thus, the Brazilian Center for Steel Construction (CBCA), adapted to remote meetings and a new immersion in the digital world, following firmly its purpose of disseminating and promoting steel construction in Brazil according to the new times.

One of the main objectives in 2021 was to disseminate steel construction through strategic partnerships through online events of entities linked to the civil construction sector. It is worth mentioning in this point, the participation in the National Meeting of Engineering and Structural Consulting (ENECE), of the Brazilian Association of Engineering and Structural Consulting (ABECE), with more than 400 accesses in the CBCA lecture, in addition to the realization of the award of the Engineering Competition during the event. Also noteworthy are partnerships with ABCEM, ABM, Drywall Association, ICZ and INDA.

In the case of the partnership with ABCEM, one of the most important CBCA projects continued to be carried out in 2021: the research that gathered data from hundreds of companies in Brazil (Steel Structure Manufacturers, Steel Tile and Steel Deck Manufacturers and Galvanized Profile Manufacturers – Light Steel Frame/ Drywall).

The studies, for the year 2020, reflect a period impacted by doubts and uncertainties generated by the covid-19 pandemic, but also show considerable numbers of growth, with emphasis on increased revenues and job creation.

In the scenarios identified by the surveys, the production of steel structures, for example, grew 24.9% in 2020, compared to the previous survey, with 2019 data. It was also observed that the steel construction grew pulled by the search for productivity at construction sites and that more than 60%

of manufacturers demonstrated growth expectations with the closing of 2021, compared to the immediately preceding year.

Regarding steel structure manufacturers, there was also a significant increase in their production capacity, with a rise for the 3rd consecutive year, mainly driven by the acquisition of machinery by large companies. It is a positive reflection of the higher demand in 2020. There was also an increase related to jobs, with a 7.3% increase in the number of employees, reaching 32,600 professionals, the highest number in the last 5 years.

Another very important objective for the CBCA is to disseminate knowledge in the academic and professional environment, promote best practices in steel construction, as well as stimulate the exchange of knowledge and discussion of issues related to the sector and disseminate topics related to steel construction.

Therefore, the "Stay Home" courses were a quick adjustment to the new reality resulting from the pandemic, bringing an assertive dynamic to all those in search of knowledge. Last year there were three webinars and two masterclasses, with a direct impact on almost 4,000 participants.

Also in the training pillar, it is worth mentioning the 3rd Competition for Engineering Students and the 14th Competition for Architecture Students of CBCA for university students from all over Brazil. The prize was R\$8 thousand for the winner of each action. The 1st place of the Architecture Competition in Brazil won, for the 3rd year in a row, the international award of the Alacero de Diseño en Acero Competition. Joining the two Contests, more than 250 students from 60 universities were involved.

MESSAGE FROM THE CEO

The CBCA also reached teachers and students through online academic weeks. In 2021, more than 1,500 students accompanied the entity's lectures at these events. We also had a Scientific Initiation scholarship, with 14 research proposals on the themes of Modular Construction, Passive Protection and High Strength Steel, and a Master's degree, in partnership with the Federal University of Espírito Santo (UFES), with the title "Analysis and dimensioning of fire coating materials in steel structures".

In the disclosure block, one of the highlights was the continuation of the strategic work on CBCA's social networks (Facebook, Instagram, Twitter, Youtube and LinkedIn), with more than 35 thousand followers on our digital platforms, a 70% growth in 2021 compared to the previous year. In addition, there were more than 130 insertions in newspapers, websites and TVs throughout the year, directly citing the CBCA.

When it comes to disclosure, it is also worth mentioning Revista Arquitetura & Aço, which followed its digital format, performing very well in three annual editions. Eight more promotional videos were released on the CBCA's youtube channel, in addition to having published editions of the SCIENTIFIC JOURNAL – REA and started the process of launching two Manuals: "Construções Modular" and "EasyCode".

With an optimistic look to the future, CBCA believes in the resumption of Brazil's economic growth, based on the expectation of greater steel consumption in civil construction and infrastructure works, and the benefits of steel construction regarding sustainability,

especially when we analyze the life cycle of the construction system. We will continue to guide our actions in disseminating the importance of industrialized construction, in the new technologies related to metal construction and in the benefits that steel can provide for the development of Brazil.



**Eduardo
Fares
Zanotti**
CEO



PROMOTE AND EXPAND
THE PARTICIPATION OF
STEEL CONSTRUCTION
IN THE NATIONAL MARKET,
PERFORMING ACTIONS TO
ITS DISCLOSURE AND
SUPPORTING YOUR
DEVELOPMENT
TECHNOLOGICAL.



SUMMARY

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SARAN AGUI
UN RESTAURANTE
DA COZINHA
LUBRE.

C
↑
Paviment
Assado
Assado

Pazzo Felice
Pazzo Felice

CONSORTIUMS

MANAGERS

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

Blat Estruturas Metálicas

Barbieri do Brasil Ind. E Com.

CBMM - Cia. Bras. de Metal. e Mineração

Center Steel Eng. Light Steel Framing

CEP Eng. Pré Fabricada

Comercial Gerdau

Grupo Pizzinatto


ISOESTE Construtivos Isotérmicos

Perfinaço

Soluções Usiminas

Tuper

Sinconstruct

 *New companies*

MANAGEMENT

Executive Director

Eduardo Fares Zanotti

Management Committee

ArcelorMittal Tubarão..... Eduardo Fares Zanotti

Gerdau..... Cesar Obino da Rosa Peres

Usiminas Ascânio Merrighi de Figueiredo Silva

Brazil Steel/ CBCA Débora Oliveira

Executive Committee

ArcelorMittal TubarãoAlexandre Gama

Gerdau.....Rosane Beviláqua

UsiminasHumberto Bellei/Angela Guedes

CBCARafael Silva

Executive Management

Director Débora Oliveira

Executive ManagerRafael Silva

Marketing and Training CoordinatorRicardo Werneck

Technical Advisor Isadora Arêas

HIGHLIGHTS



CBCA
New Site



REA
New Site



1st Place
Awarded at Alacero



HIGHLIGHTS



Masterclass



Scholarships
Studies



Research by CBCA and ABCEM points to an optimistic scenario for the industrialized steel construction sector in the coming years

The Brazilian Steel Construction Center (CBCA) – an entity managed by the Brazil Steel Institute – in partnership with the Brazilian Association of Metallic Construction (ABCCEM), finalized the 2021 editions of the annual surveys carried out with steel structure manufacturers. The studies, for the year 2020, reflect a period impacted by doubts and uncertainties generated by the covid-19 pandemic, but also show considerable numbers of growth, with emphasis on increased revenues and job creation.

The research “Steel Structure Manufacturers’ Scenario” considers data from metal structures, power towers for transmission, towers for wind energy, structure for solar energy park and metal fenders. The 325 companies participating in this researched scenario produced, in 2020, 1.03 million tons of steel structures, an increase of 24.9% compared to 2019, a pre-pandemic year, of which 487.4 thousand tons in production of metal structure works, 507.1 thousand tons in production for works in the energy segment and 33.2 thousand tons in production of metal fenders.

This amount also led to a 49.3% growth in company revenues: the survey shows

revenues of R\$10.6 billion in 2020 compared to R\$7.1 billion in 2019 and 5.1 billion in 2018, showing that, in two years, the companies’ revenues more than doubled. An increase related to jobs was also observed, with a 7.3% increase in the number of employees, reaching 32,600 professionals, the highest number in the last 5 years. About 48% of steel frame manufacturers increased their frameworks, reflecting increased demand.

The study “Scenario of Manufacturers of Galvanized Profiles - Light Steel Frame and Drywall showed growth of 52.7% (Light Steel Frame) and 17.2% (Drywall) in production compared to 2019, with optimistic expectations for the following years. The 37 participating companies had a turnover of R\$743 million reais, an increase of 72.8% compared to the previous year.

Difficulties: manufacturers also expressed how internal difficulties for the growth of their companies qualify the technical staff, improve internal processes and improve marketing.

In view of the scenario presented, it is also important to highlight that in all surveys, more than half of the manufacturers were optimistic, believing in market growth to be reflected in the 2022 studies, with a look at 2021.

Every year, research has been improved in methodology, data collection and the search for new manufacturers. It is a continuous process of improvement, with the objective of presenting a better view of the sector and that consequently assists in directing actions for a better development of civil construction.

An increase related to jobs was also observed, with a 7.3% increase in the number of employees, reaching 32,600 professionals, the highest number in the last 5 years. About 48% of steel frame manufacturers increased their frameworks, reflecting increased demand.

The CBCA and ABCCEM believe that the research serves as support for the promotion of industrialized steel construction with society, government and the construction market, exposing the real importance and dimension of steel construction. The surveys are published on the CBCA and ABCCEM websites.

STATISTICAL DATA

SURVEYS

332

VISITS / YEAR

STEEL STRUCTURE MANUFACTURERS' SCENARIO



In this year's edition, the participating companies producing steel structures together produced about 1.03 million tons, with revenues of R\$10.6 billion and had about 32.6 thousand employees in 2020.

In 2020, the steel structures sector had a 24.9% growth in production compared to 2019, with a significant increase in the energy segment.

Among the difficulties for the company's growth, qualifying the technical staff and improving the processes stood out as the main internal factors.

As external factors, the cost of raw materials was cited by 79.3% of respondents as the main responsible factor that hinders market growth.

The increase in the price of raw material is an item that has greatly impacted manufacturers. Compared to 2019, this difficulty was pointed out only by 16% of the participants. Actions to improve taxation to optimize its competitiveness against competing products and systems is also one of the main challenges for the sector.

STEEL & STEEL DECK ROOF TILE MANUFACTURERS SCENARIO



In this year's edition, the participating companies producing steel tiles, closing panels and steel deck, together they produced around 434 thousand tons, with revenue of BRL 3.3 billion and included about 13,400 employees in 2019.

In 2019, the sector of steel tiles and façade panels had a growth of 3.4% in relation to 2018. The steel deck sector, on the other hand, decreased by about 5%. However, steel deck represents 2.8% of the total and, being a smaller volume, variations in production generate higher percentage impacts.

Among the difficulties for the company's growth, qualifying the technical staff and deficiency in the marketing area stood out as the main internal factors.

As external factors, in 2019, competition with imported and/or low quality material stood out as the item that impairs growth.

In 2020, the increase in the price of raw material greatly disturbed manufacturers, who attributed the cost of raw material as the main factor that impacted market growth.

GALVANIZED PROFILE MANUFACTURERS SCENARIO FOR LIGHT STEEL FRAME & DRYWALL



In this year's edition, the companies participating in profiles for Light Steel frame and Drywall, together produced around 62.6 thousand tons, with revenue of BRL 430 million and included 2,286 employees in 2019.

The year 2020 was a year of growth for manufacturers of galvanized profiles, with a 17.2% increase in production, compared to 2019.

Following the growth in production, there was also an increase of 12.3% in production capacity, but it is important to consider that there was an increase in the number of companies surveyed, mainly manufacturers of Light Steel Frame.

Among the difficulties for market growth, marketing and team qualification stood out as the main internal factors.

As external factors, the cost of the raw material strongly impacted, being pointed out as the main item. Compared to 2019, the main concern was the low market knowledge about the system and the cost of the raw material was not mentioned.

For the strengthening of the sector, they consider it important that there are programs for the qualification of the workforce and also greater dissemination of the system among technical professionals.



PROMOTION & DISSEMINATION

CBCA SITE

277.367

VISITS / YEAR
DESKTOP: 68.54%
MOBILE: 30.76%
TABLET: 0.70%

7.166

NEW REGISTERED



75.706

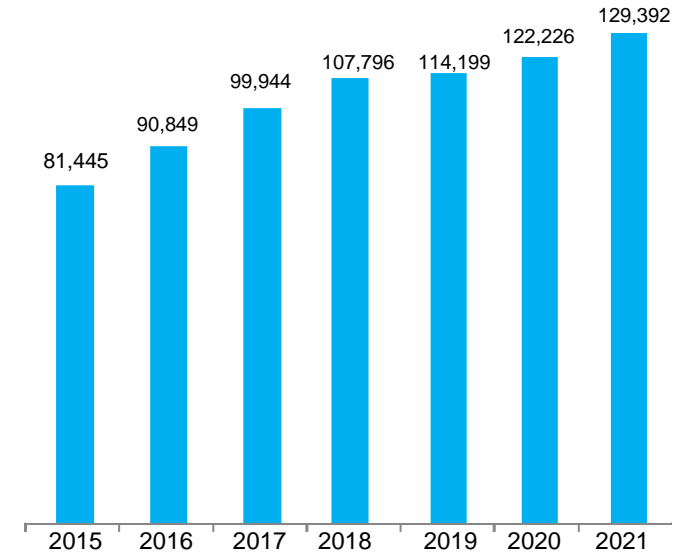
NEW VISITORS
(* The measurement of the site is made based on Google Analytics)

774.617

TOTAL ELECTROMECHANICS VIEWS OF PAGES

AVERAGE SESSION DURATION: 2:40s

REGISTRATIONS ON SITE



NUMBERS ENGLISH SITE

New users: 1.177
Page View: 1.680
Average session duration: 01:32s

LANGUAGES

PT-BR: 69.73%
EN-US: 16.55%
PT-PT: 2.37%
OTHER: 11.35%

PROMOTION & DISSEMINATION

SITE VISITS | SITE MAP

277.367
2021

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

267.053

2020
Record: 27,614 (JUL)
920.5 / day

207.183

2019
Record: 26,430 (NOV)

223.678

2018

Record: 28,725 (MAR)

INSTITUTIONAL

THE CBCA
PARTNER ENTITIES:
ACTIVITY REPORT
CONSORTIUMS

TRAINING

eLearning
ON-SITE COURSES
CONTESTS
ROADSHOWS
WEBINARS
VIDEO CLASS
MASTERCLASS
SCHOLARSHIP

LIBRARY

A&A MAGAZINES

NEWS

AGENDA

CONTACT US



CBCA BENEFITS

1.631

NEW USERS

3.548

VISITS

247

NEW WORKS REGISTERED

14.441

SPECIALIZED
(ARCHITECTS AND ENGINEERS)

23.461

PAGE VIEWS

04:05s

AVERAGE SESSION DURATION



Integration with the Brazil Steel Construction Guide through a link to the suppliers registered at the construction sites

Steel construction is increasingly present in Brazil.

To catalog and assemble steel works in Brazil, the CBCA created the Works Bank - an indexing system of works by typologies, use categories, designers, and structure manufacturers.

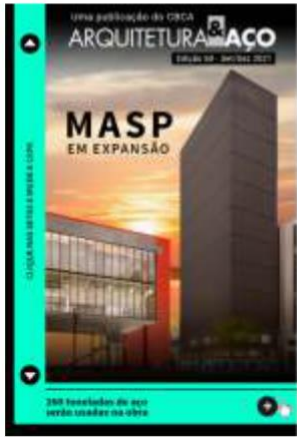
The Works Bank aims to highlight the production chain of steel construction in addition to serving as a bank of ideas and construction processes.

- > Building typology
- > Usage category
- > Architecture
- > Structural Design
- >> Structure manufacturer

Works Bank is available on a responsive website for Smartphone and Tablet (IOS and Android)

PROMOTION & DISSEMINATION

ARCHITECTURE & STEEL MAGAZINE
PUBLISHINGS



ISSUE No. 60



ISSUE No. 59



ISSUE No. 58

613

VIEWS OF ARTICLES AND
TECHNICAL NOTES

27.764

SITE NEWS: VIEWS

18.095

PAGE VISITS
FROM MAGAZINES

13.636

NEW USERS

21.588

PAGE VIEWS

15.748

VIRTUAL MAGAZINE ACCESS

3.544

MAY - MONTH OF GREATEST
ACCESS

*Due to the pandemic,
there was no sending of
materials to universities,
teachers and professionals.*

Launched in September/19, *the* application aims to guide investors, builders, architects, engineers, manufacturers, assemblers and end customers for good practices in relation to steel construction, with minimum criteria recommended for the stages from conception to execution of designs, manufacture, transport and assembly of its structures and interfaces.

Through an interactive, self-instructive checklist, the professional can access each of the available tabs (Management, Architecture, Structure, Manufacturing, Logistics and Assembly, and Passive Protection) in order to know which direction to take so that his design is executed at a level of excellence.

The practices recommended in the Guide are for guidance, and it is up to those responsible to define which apply to the specific situations of each project.



01:37s

AVERAGE TIME ON PAGE

3.015

PAGE VIEWS

ANDROID

311

TOTAL INSTALLATIONS CARRIED OUT

252

TOTAL INSTALLATIONS CARRIED OUT

201

INSTALLATIONS ON ACTIVE DEVICES

PROMOTION & OUTREACH

MEDIA

CBCA NEWS

Created in 2010, and published weekly.



27.764
VIEWS

24
INDICATIONS
OF CONTENT

PRESS

46 agendas were worked with the press, with releases, notes and articles, reaching the spontaneous insertion of CBCA in 131 articles in newspapers, magazines, portals and televisions in 2021.

In the absence of a specific CBCA indicator for measuring exposure results in the media, the advertising equivalence can be considered, that is, the estimate of amounts that would be spent if the content published in the vehicles were charged in the form of an advertisement. According to the Communicate platform, in 2021 this amount was R\$642,532.00. This estimate is calculated basically based on the relevance of the vehicle, number of accesses on the website and circulation of the newspaper.

Articles published in various media, with emphasis on Estadão, Valor Econômico, Estado de Minas, Revista Casa e Jardim, Diário do Grande ABC, Diário do Litoral, A Tribuna and Portal ArchDaily.

Releases = 46

Published Materials = 131



PROMOTION & DISSEMINATION

SOCIAL NETWORKS

TOTAL FOLLOWER BASE

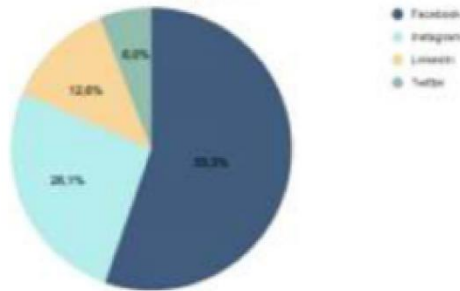
33.2K

+73% COMPARED TO 2020

FAN BASE



FOLLOWERS



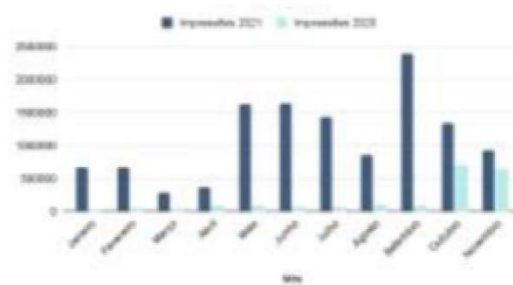
Facebook	17.774	+14%	in relation	2020
Instagram	8.399	+13%	in relation	2020
LinkedIn	4.036	+100%	in relation	2020
Twitter	1915	+2.9%	in relation	2020

TOTAL PRINTS

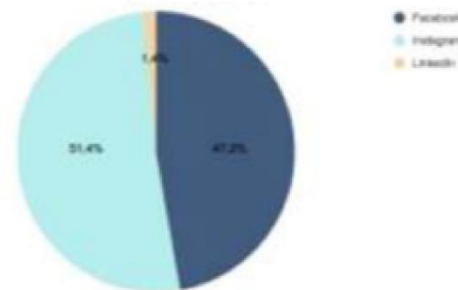
12.2M

+535% COMPARED TO 2020

PRINTS



PRINTS



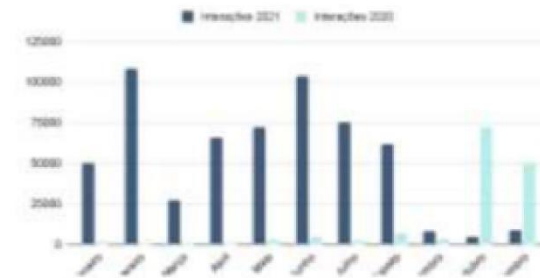
Facebook	5.580.428	+241,3%	in relation	2020
Instagram	6.078.791	+302,3%	in relation	2020
LinkedIn	166.415	+9,9%	in relation	2020

TOTAL INTERACTIONS

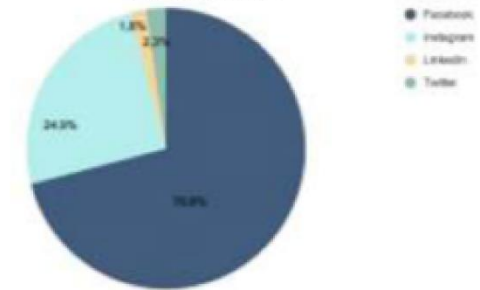
584.1K

+295% COMPARED TO 2020

INTERACTIONS



INTERACTIONS



Facebook	414.383	+261%	in relation	2020
Instagram	145.592	+6.662%	in relation	2020
LinkedIn	10.713	-21,8%	in relation	2020
Twitter	13.486	-21,56%	in relation	2020



131.698


VEWS



PROMOTION & DISSEMINATION

WEBINARS

WEBINARS ON CBCA'S FACEBOOK PAGE TO REPLACE ROADSHOWS THAT WOULD BE HELD IN 2020



ENGENHARIA

Premiação do 3º Concurso do CBCA para Estudantes de Engenharia 2021

CBCA

Premiação do 3º Concurso para Estudantes de Engenharia CBCA

INÍCIO: 20 de Outubro de 2021

INSCRIÇÕES ENCERRADAS

ASSISTA SAIBA MAIS



CBCA

WEBINARS CBCA

SOLUÇÕES EM AÇO

Premiação do 14º Concurso CBCA para Estudantes de Arquitetura

22 DE SETEMBRO - 19H

Premiação do 14º Concurso para Estudantes de Arquitetura CBCA

INÍCIO: 22 de setembro de 2021

INSCRIÇÕES ENCERRADAS

ASSISTA SAIBA MAIS



CBCA

WEBINAR DEBATE

SOLUÇÕES EM AÇO

O DIÁLOGO ENTRE ARQUITETURA E ENGENHARIA NA CONSTRUÇÃO INDUSTRIALIZADA EM AÇO

29/04 AS 17H



HELOISA M. MARINGONI

Soluções em Aço - O Diálogo entre Arquitetura e Engenharia na Construção Industrializada em...

INÍCIO: 29 de abril de 2021

INSCRIÇÕES ENCERRADAS

ASSISTA SAIBA MAIS

1.326 VIEWERS

PROMOTION & DISSEMINATION

MASTERCLASSES

Masterclasses, new in 2021, are live online lectures with more specific themes. They represent a kind of master class/teaser, offering interested parties, in about 1h30, the summary content of some courses that are offered by CBCA. Two masterclasses were held in 2021, broadcast on CBCA's YouTube channel.



Masterclass - Dimensionamento de Estruturas de Aço

INÍCIO: 01 de julho de 2021

1.254

VIEWERS



Masterclass - Light Steel Framing

INÍCIO: 25 de fevereiro de 2021

1.229

VIEWERS

2.483

TOTAL VIEWERS

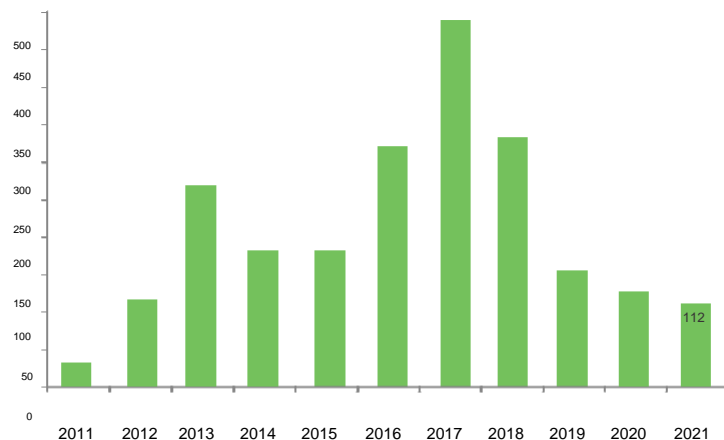
PROMOTION & DISSEMINATION

COMPETITION FOR ARCHITECTURE STUDENTS

Health & Wellness

In 2021, 112 teams representing 14 Brazilian states and 51 Faculties of Architecture were registered. Of the works received, there was an evaluation among the 62 projects that were delivered, among which 40 were selected for the final evaluation.

EVOLUTION OF PARTICIPATION



Winners

1st Placed

Universidade Presbiteriana Mackenzie

2nd Place

Faculty of Architecture and Urbanism –
University of São Paulo

3rd place

FCT Unesp – Faculty of Sciences and
Technology

Honorable Mention I

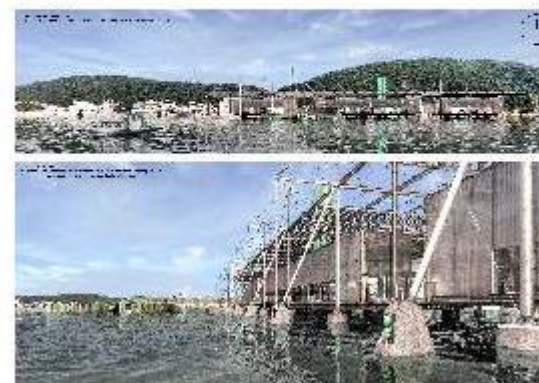
Universidade Federal do Paraná

Honorable Mention II

CATHOLIC PONTIFICAL UNIVERSITY OF CAMPINAS

Honorable Mention III

FEDERAL UNIVERSITY OF PARANÁ



Winning project of the 2021 edition.

19.293

VISITS IN THE YEAR

48.949

VIEWS

112

REGISTERED TEAMS

PROMOTION & DISSEMINATION

CONTEST FOR STUDENTS OF ARCHITECTURE - ALACERO

Theme: Health and Wellness

Team from Brazil wins 1st place in the 13th Alacero Competition for Architecture Students After winning the 14th Competition for Architecture Students of the Brazilian Center for Steel Construction (CBCA), a team from the Mackenzie Presbyterian University won first place in the 14th Alacero Competition for Architecture Students, promoted by the Latin American Steel Association (Alacero).

The second place was with the team of the Universidad Nacional de Córdoba, from Argentina and the third place with students from the Universidad de Santiago (USACH), from Chile.

In addition to the team from Brazil, other participating countries: Argentina, Chile, Mexico, Ecuador and the Dominican Republic.



PROMOTION & DISSEMINATION

COMPETITION FOR ENGINEERING STUDENTS

Theme: MIXED-USE MULTI-STOREY BUILDINGS

The meeting of the Judging Committee was held on August 9, 2021, remotely, to judge the work related to the 3rd CBCA Competition for Engineering Students 2021.

In all, 08 projects were analyzed.

The first comments of the jury were related to the technical quality of the works received, considering the training stage of the students participating in the 2nd CBCA Competition for Engineering Students - 2020.

6.214

VISITS IN THE YEAR

10.702

VIEWS

01:36s

AVERAGE SESSION DURATION



Winners

1st Placed

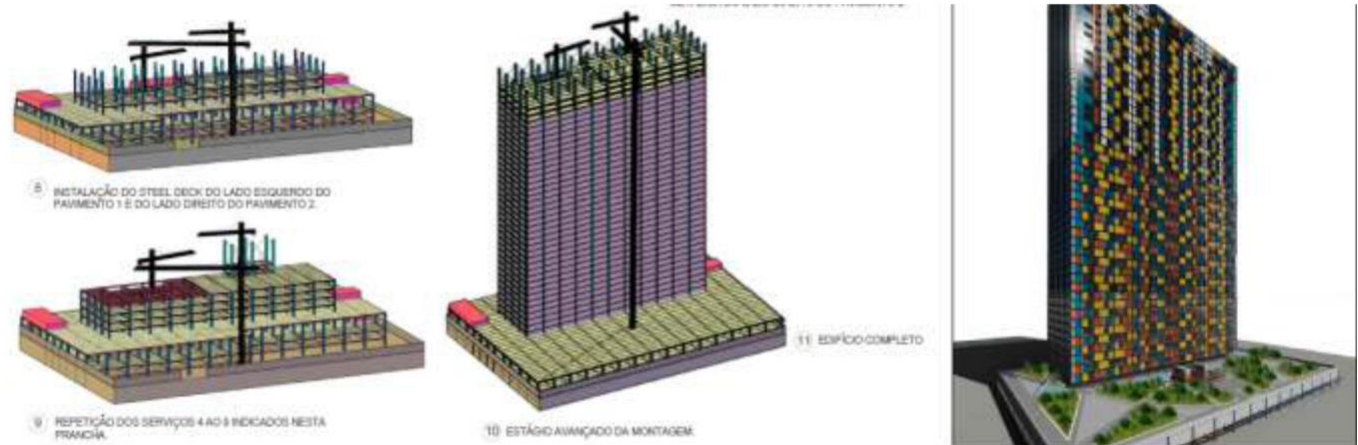
FEDERAL UNIVERSITY OF RIO DE JANEIRO (UNIVERSIDADE FEDERAL DO RIO DE JANEIRO)

2nd Place

Universidade Federal dos Vales do
Jequitinhonha and Mucuri - MG

3rd place

UNIVERSIDADE FEDERAL DE LAVRAS



SPONSORED / SUPPORTED

II Week of Extension Activities of UnP – Potiguar University - Steel Construction: feasibility and durability – 40 people

III NATIONAL CONGRESS OF CIVIL ENGINEERING OF the FEDERAL RURAL UNIVERSITY OF the SEMIARID (CONGRESA) - "BIM and the Management of Steel Structures Projects - From Conception to Assembly" - 90 People

PUC-Rio "Integrated Engineering Week – SiEng" - "BIM and the Management of Steel Structures Projects - From Design to Assembly" - 100 people

23rd CEATEC Integrated Week of PUC-Campinas - Light Steel Framing: Design, Applications and Execution - 110 people

ABM Webinar - "Sustainability in Metallic Construction" - 40 people

ENECE 2021 - National Meeting of Engineering and Structural Consulting – ABECE - 370 people

Engineering Week of UESC - State University of Santa Cruz - Steel Construction: feasibility and durability - 101 people

SENGEN UFVJM - Steel Solutions for the Engineering Challenge - 184 people

Newton Paiva Lecture - Metallic Structure in Project Design - 30 people

Civil Engineering Meeting UFF - Light Steel Framing: Design, Applications and Execution - 100 people

XXIV Engineering Week of UNESP Bauru - Project Statics: Steel Structure Dynamics - 370 people

XI Week of Eng. Civil - UFC - Light Steel Framing: Design, Applications and Execution - 45 people

1.580

ATTENDEES



PARTNERSHIPS

EXCHANGE WITH SIMILAR ORGANISATIONS



worldsteel Association

- Joint actions to promote steel construction.



ALACERO – Asociación Latinoamericana del Acero

- Support, with the Technical Secretariat, in the development of CODUA (Comité de Desarrollo del Uso del Acero) actions.
- Coordination of Brazilian participation in the 11th ALACERO Steel Design Competition for Architecture Students 2018.

NATIONAL ENTITIES

ABCEM - Brazilian Association of Metallic Construction

ABINOX - Brazilian Association of Stainless Steel

ABECE - Associação Brasileira de Engenharia e Consultoria Estrutural

ABM – Associação Brasileira de Metallurgia, Materiais e Mineração

ABRAMAT - Associação Brasileira da Industria Materiais de Construção

DRYWALL - Associação Brasileira do Drywall

FIRJAN - Federation of Industries of the State of Rio de Janeiro

ICZ - Institute of Non-Ferrous Metals

INDA – Instituto Nacional dos Distribuidores de Aço

UNIVERSITIES

Newton Paiva

PUC-Campinas – Pontifical Catholic University of Campinas

PUC-Rio - Pontifical Catholic University of Rio de Janeiro (Pontifícia Universidade Católica do Rio de Janeiro)

UENF - State University of Northern Rio de Janeiro

UESC - Santa Cruz State University

UFC - Federal University of Ceará

UFERSA – Federal University Of Rural do Semiárido

UFES - Federal University Of Espírito Santo

UFLA - Federal University Of Lavras

UFPR - Federal University Of Paraná

UFRJ - Federal University Of Rio de Janeiro.

UFVJM – Federal University Of Vale do Jequitinhonha e Mucuri

Unesp – Paulista State University

Universidade Presbiteriana Mackenzie

UnP - Potiguar University

USP – São Paulo University

UTFPR - Federal Technological University of Paraná



PROMOTION AND STANDARDIZATION OF QUALITY

STANDARDS TECHNIQUES

CE-02:125.004 – Commission for the Study of Constructive Systems Light Steel Framing Standard in progress, and parts I,II and III are forwarded to ABNT for the 2nd national consultation.

CE-24:103.006 – Commission for Reaction to Fire Studies of Materials – ABNT NBR 16951 - Reaction to fire of external facade systems and coatings - Test method, classification and application of fire propagation results on facade surfaces, completed in August/21.

ABNT NBR 8800: 2008 (revision)
Standard under review.

ABNT NBR 14513 – Coated steel tiles with corrugated section and ABNT NBR 14514 – Coated steel tiles of trapezoidal section (overhaul)
Under review. Norm will be finalized in the first half of 2022.

CE-028:001.004 - Cold Formed and Welded Sections Study Committee (review)
Standard in progress with the revision scheduled to end in mid-22.

CE-002:122.016 - Forces due to wind in buildings for review - NBR 6123
Standard in progress.

GT - NBR 16690:2019 - Photovoltaic Commission Meeting
Standard in progress.





Development of Technical Material

STEEL STRUCTURE MAGAZINE - REA

Site with new layout.

The Magazine supported by CBCA opens space for professionals to exhibit their scientific articles or technical notes on topics related to steel structures and mixed steel-concrete structures.

The publication, which is scientific in nature, has an active and independent editorial board in the evaluation of articles, had its 9th volume published, containing three issues, with a total of 20 articles, always with the participation of researchers from Brazil and Portugal. All articles receive the DOI (*).

(*) DOI stands for Digital Object Identifier. It is a standard for identifying documents on digital networks.



5.383

ACCESSES

8.163

VIEWS

3.363

NEW USERS

Devices:
Desktop: 85.16%
Mobile: 14.34%
Tablet: 0.50%

DEVELOPMENT OF TECHNICAL MATERIAL

GUIA BRASIL DA STEEL CONSTRUCTION

The Brazil Steel Construction Guide is a pioneering initiative by the Brazilian Steel Construction Center - CBCA, with support from the Associação Brasileira da Construção Metálica - ABCEM, aiming at the growth of the sector. It maps and disseminates the production chain that participates in steel construction, facilitating consumers' access to the different products, services and solutions available on the market.

The Guide is continuously updated to broaden its scope and coverage, incorporating new segments of steel construction and new participants.

23.035

ACCESS

1.795

DOWNLOAD

33.271

BUSINESS VIEWS

1.246

ATTENDEES

14.758

NEW USERS

25

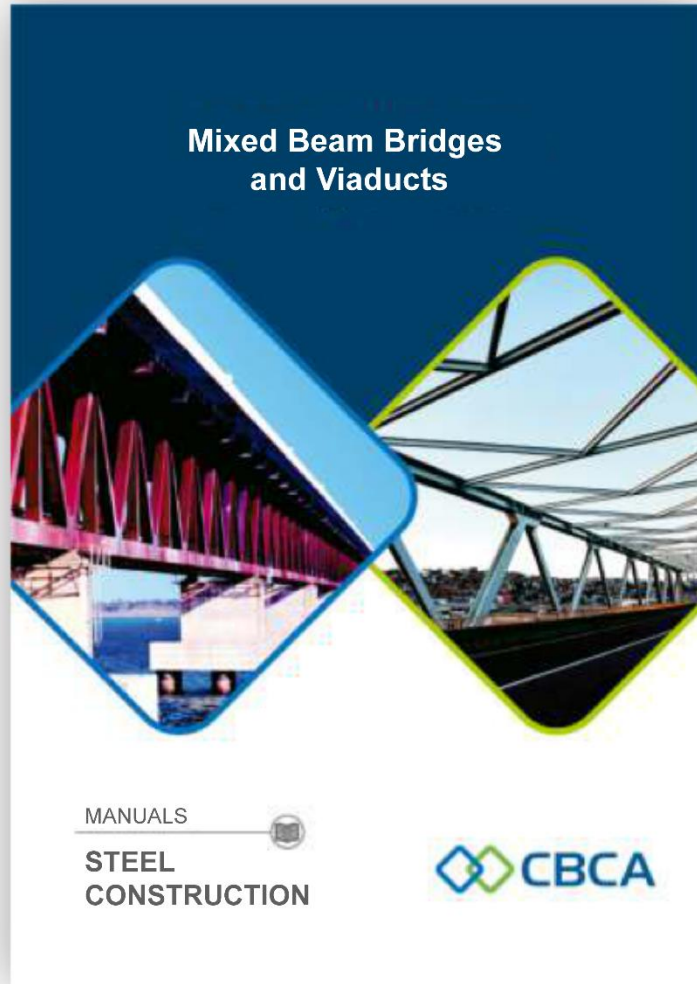
NEW REGISTRATIONS



The Guide is *available* on a responsive website for Smartphone and Tablet (IOS and Android).

Development of Technical Material

MANUALS OF STEEL CONSTRUCTION



30.649

MANUAL DOWNLOADS

81.140

ACCESS TO MANUALS

Manuals Finished in 2021:

- Manual Easy Code
- Modular Construction Manual (new)

Scheduled Editions for 2022:

- Fire Resistance Manual (overhaul)
- Façades Manual (new)



LABOR QUALIFICATION

VIDEO CLASSES

CHARACTERISTICS OF CONSTRUCTION IN A CO

FEASIBILITY AND ECONOMY OF STEEL STRUCTURES

TYPES OF PERFIS

CONNECTIONS

TRANSPORT AND ASSEMBLY OF STEEL STRUCTURES

FIRE SAFETY IN BUILDINGS

PROTECTION AGAINST CORROSION

STEEL AND STRUCTURAL

DESIGN AND STRUCTURE

EXTERNAL SEALS AND SLABS



VIDEO AULA COM MAIOR
NUM DOWNLOADS

**CHARACTERISTICS OF THE
STEEL CONSTRUCTION**

481
ACCESS

3.125
ACESSES

1.045
DOWNLOAD

3.524
VIEWS
FROM PAGE

LABOR QUALIFICATION

IN-PERSON COURSE #FIQUEEMCASA

Sizing of Steel Elements – March – 20 students

Steel Multi-storey Buildings – March – 25 students

Industrial Sheds in Steel – May – 18 students

Steel Bridge Project/ NBR 16694 – May – 15 students

Assembly of Steel Bridges – October – 12 students

Sizing of Connections – August – 06 students

Sizing of Steel Elements – Nov/Dec – 18 students

114

STUDENTS

PROMOTION DE CURSOS

Online Course

INTRODUCTION TO
STEEL CONSTRUCTION

EXECUTION OF STRUCTURES
IN STEEL

STRUCTURAL SYSTEMS
IN STEEL

LIGHT STEEL FRAMING (NEW)

DIMENSIONING OF MO
STEEL STRUCTURES

194

STUDENTS HAVE COMPLETED
eLearning



Scientific initiation scholarship

The CBCA received 14 research proposals for a scientific initiation scholarship in 2021. All proposals were related to the main themes thought for the notice (Modular Construction, Passive Protection and High Strength Steels). The winner was the student Victor Lira Nascimento, who will be guided by Professor Macksuel Soares de Azevedo, from the Federal University of Espírito Santo. The project to be developed during the period of one year will be: "Development of a computer program for dimensioning steel structures with fire protection in projected mortar".

MASTER 'S SCHOLARSHIP

The student Thayná Marcelino, from the Federal University of Espírito Santo (UFES), guided by professors Fernanda Calenzani and Macksuel Soares, is the student who received the CBCA master's scholarship in 2021. The process is in its normal course and the student's work reports are being sent, with a great evaluation. The delivery of the work, entitled "Analysis and sizing of fire coating materials in steel structures", is scheduled for February 2023.





REPORT ACTIVITIES 2021

MANAGER:



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