



MCB museu da casa brasileira

Concretagem Especial



*Paulo Helene
Jéssika Pacheco
Reinaldo Reis*

MCB 26 de março de 2019 São Paulo/SP

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Conceitos

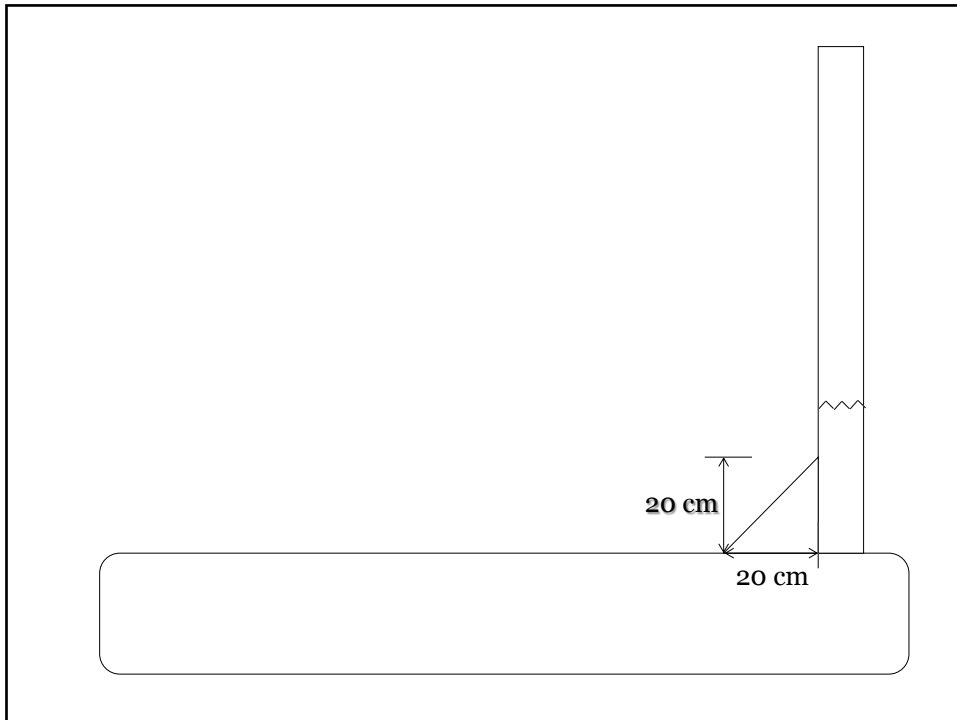
As estruturas devem ser adequadas para sua correta utilização durante toda a vida útil de projeto:

- ✓ Seguras
- ✓ Funcionais
- ✓ Suportar incêndio
- ✓ Duráveis
- ✓ Bonitas
- ✓ Sustentáveis

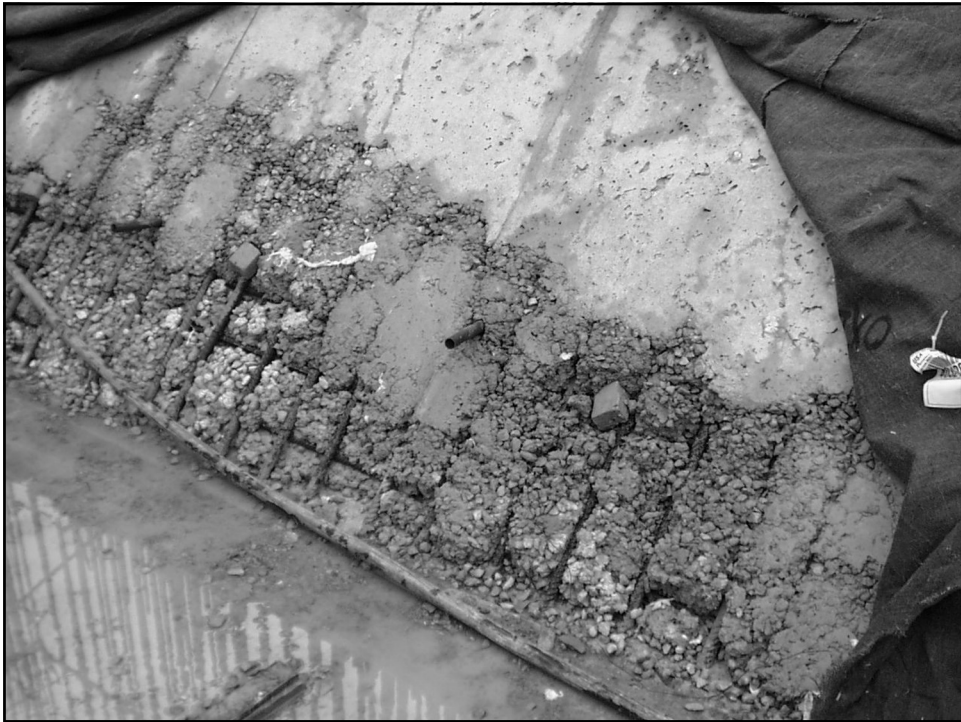
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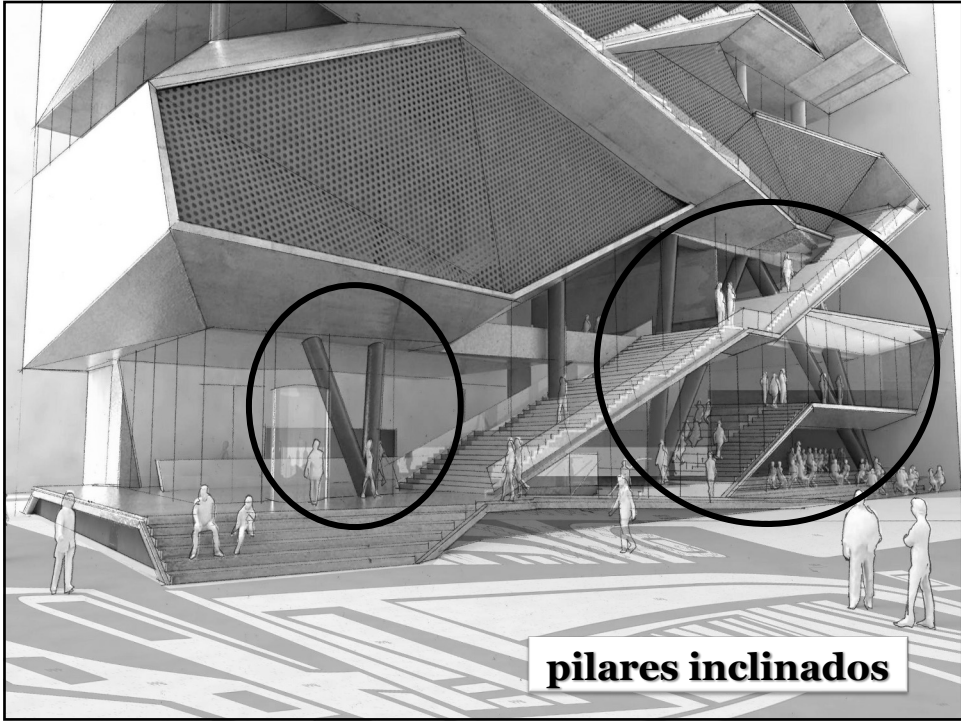
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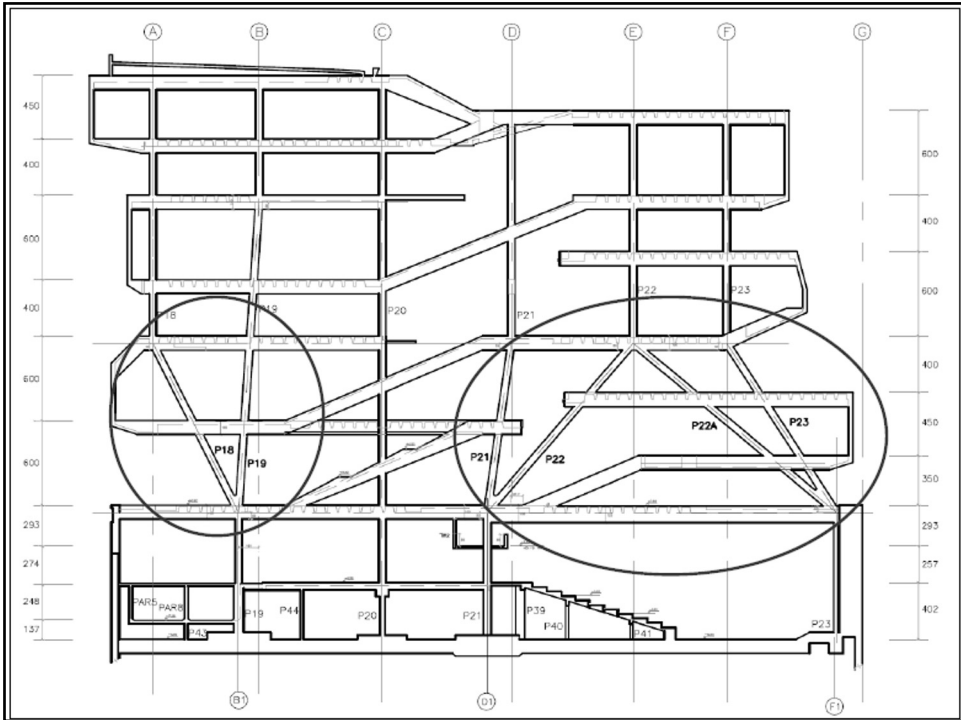
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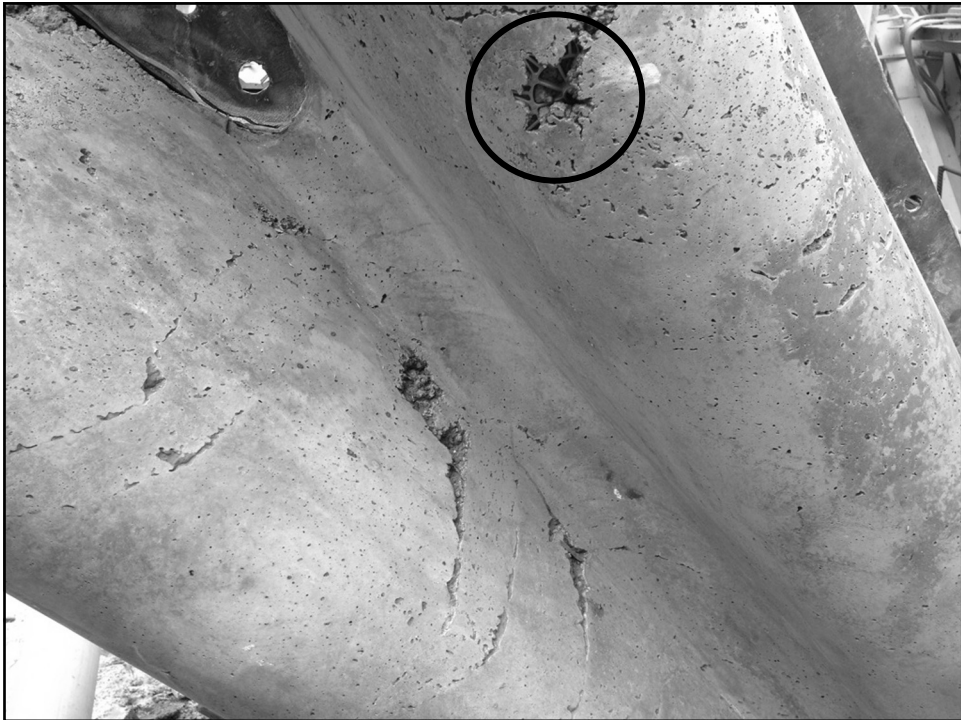
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**eu sei fazer... estou
acostumado...
resultado: → demolição total**

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Recommendations for Casting Inclined Columns

A case study on the architectural concrete columns for the Rio de Janeiro Museu da Imagem e do Som

by Carlos Brites, Jéssica Pochecco, Suelly Bueno, and Paulo Helene

The State Secretary of Culture for the city of Rio de Janeiro, Brazil, along with the Roberto Marinho Foundation (FRM), recently sponsored an important international competition for the design of the new headquarters for the city's Museu da Imagem e do Som (Museum of Image and Sound [MIS-2]). The ultimate goal was to make the MIS headquarters a globally renowned architectural icon for Rio de Janeiro. The U.S.-based architectural firm Dilser Scifidio e Zanlo was the contest and the design was developed in Brazil by the renowned firm Indio da Costa Arquitetura, Urbanismo, Design e Transporte (Indio da Costa A.U.D.T.).

In this bold design, the design architects proposed the museum as a vertical boulevard, with seven stories, a continuous external promenade, and a display of sequential ramps and floors. The new MIS-2 headquarters, shown in Fig. 1, is being built by the construction company Rio Verde. Also, the construction works are being managed by Engineering S.A., a subsidiary of Hill International.

With architectural concrete finishes specified for its unique forms and oblique lines, this building's superstructure presented some special challenges—especially for the construction of inclined columns with high-performance concrete, the subject of this article. In some cases, the columns had 6 m (20 ft) height per segment. Further, the columns' unusual geometries required the use of metal formwork. In addition to meeting aesthetic demands and compressive strength requirements (specified as a characteristic compressive strength, f_c of 50 MPa [7250 psi] at 28 days), the concrete placements were influenced by other factors, such as weather and logistics. The local climate is very hot, requiring concreting operations during temperatures of about 35°C (95°F), and the concrete supplier's plant is 50 km (31 miles) away from the work site. Trucks had to pass through heavy traffic during business hours, so transit times of at least 1 hour were required.

Fig. 1 The future MIS-2 headquarters: (a) an architectural rendering, and (b) a work in progress, in December 2015 (image courtesy of Dilser Scifidio e Zanlo)

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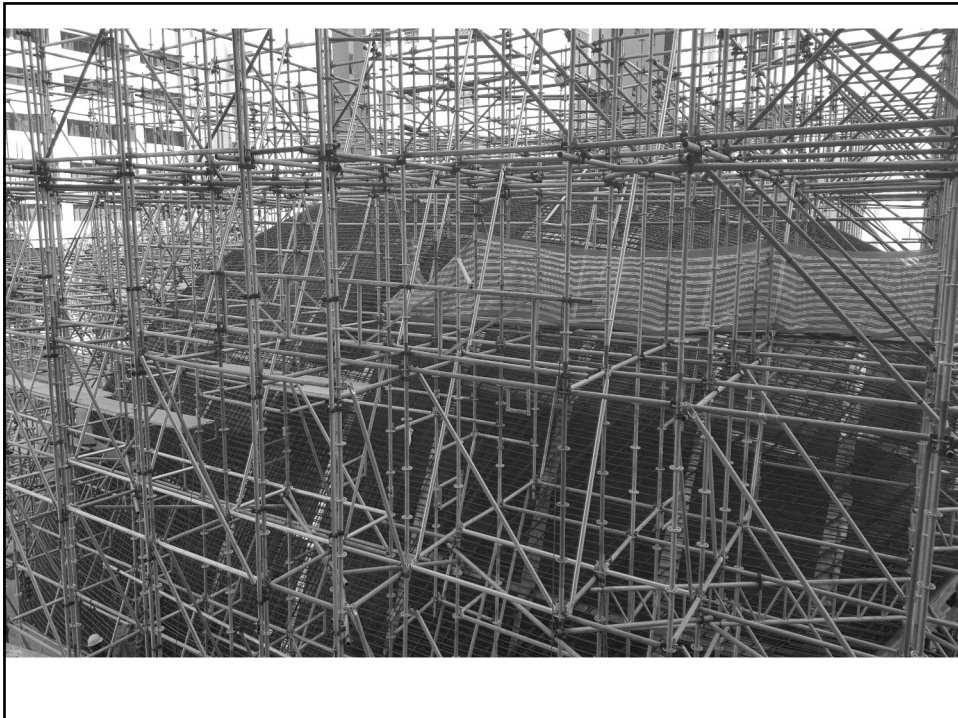


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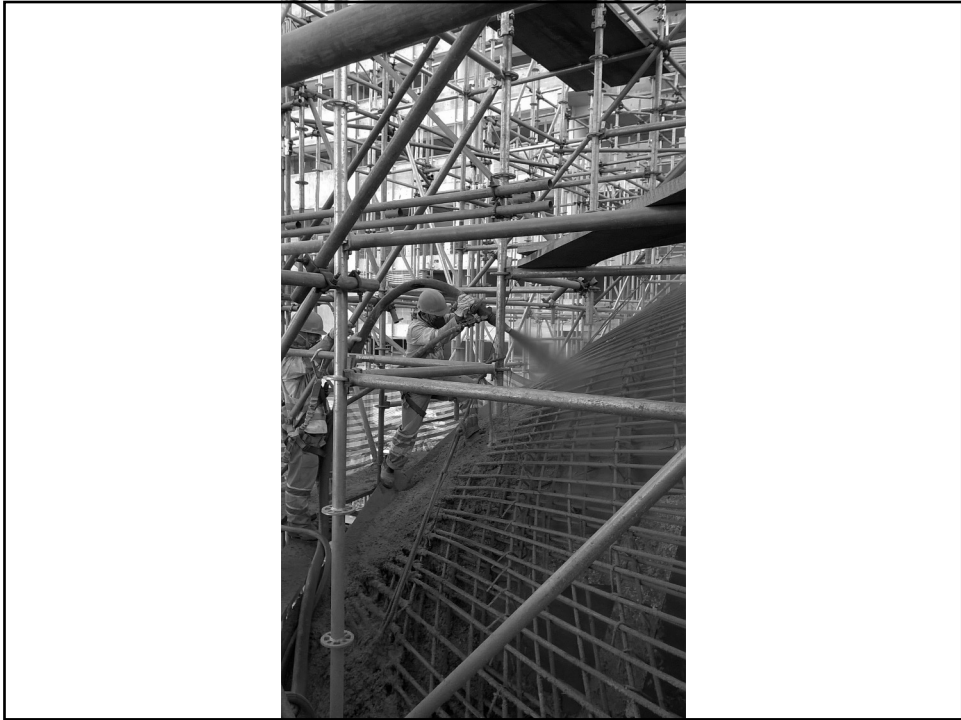
Protótipos



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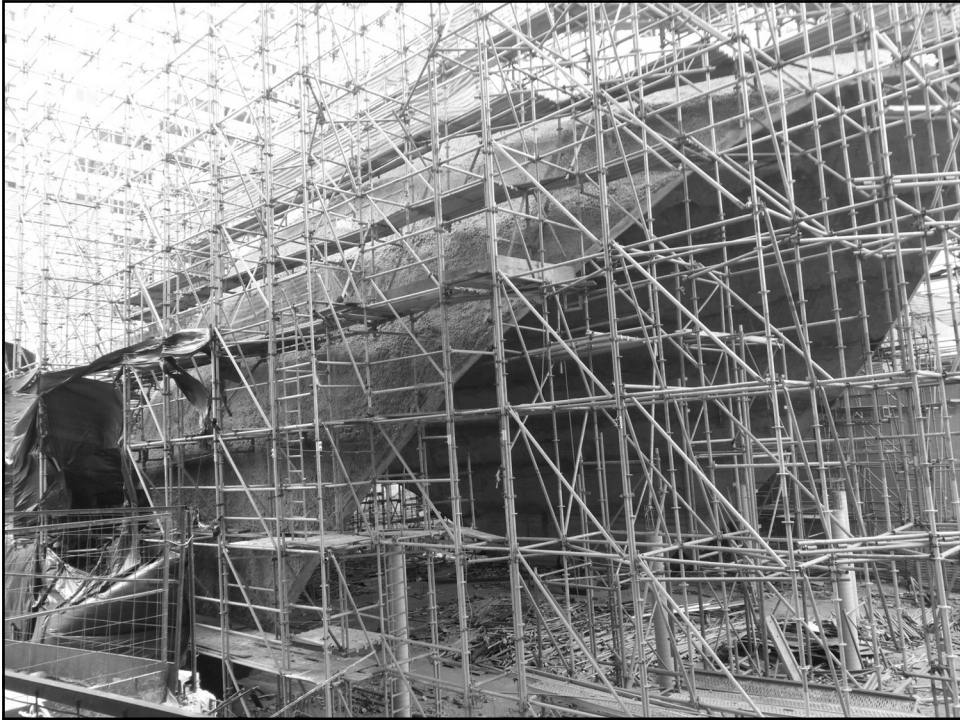
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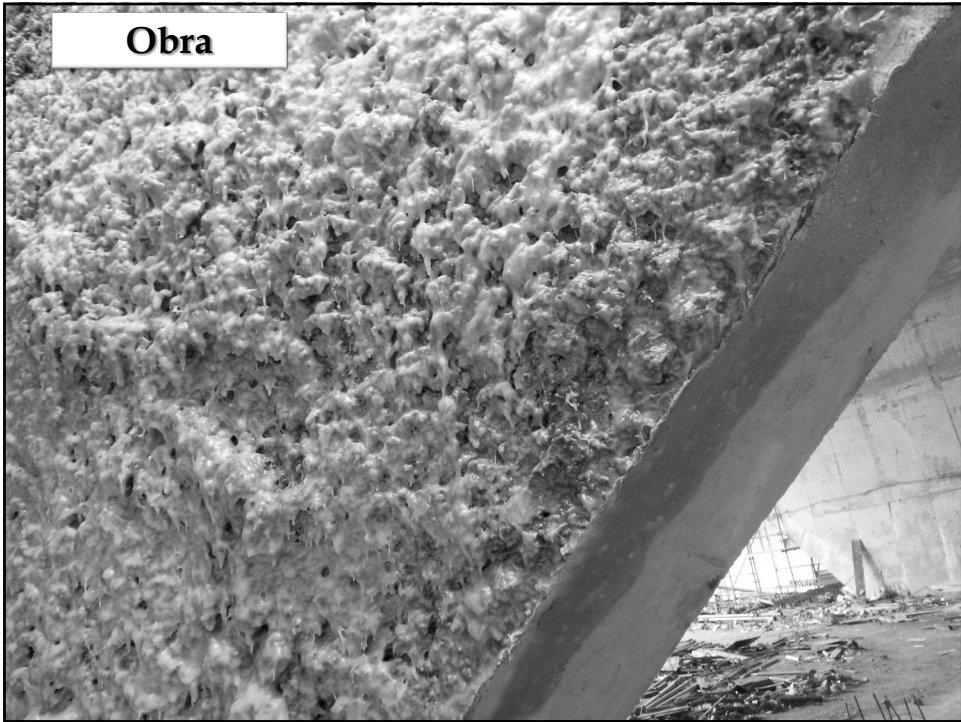
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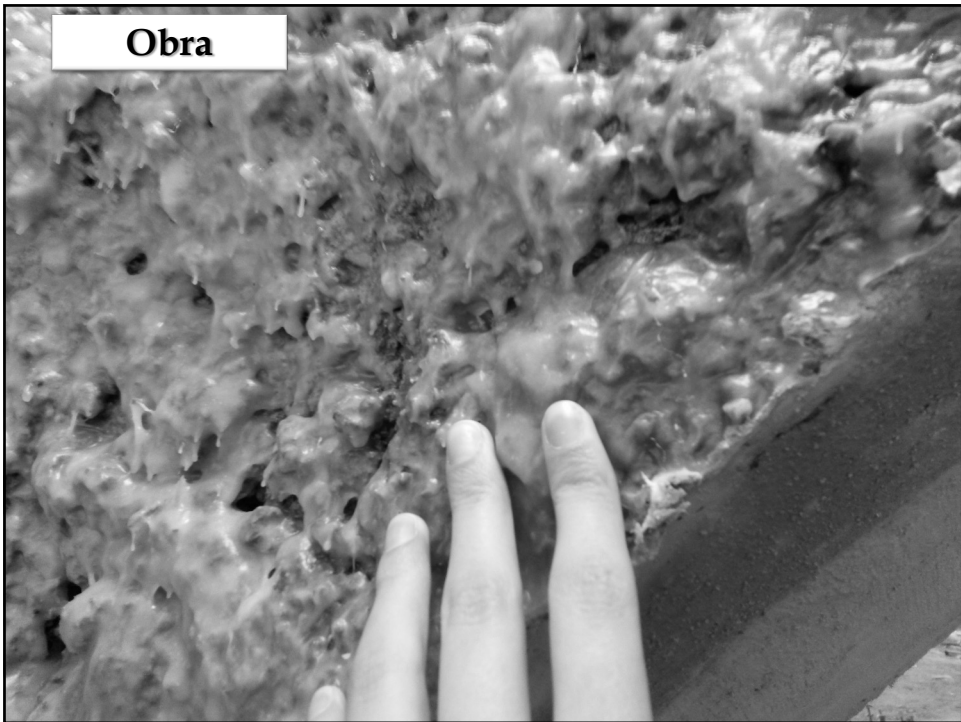
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**Retirada da
fôrma
precocemente**



Obra

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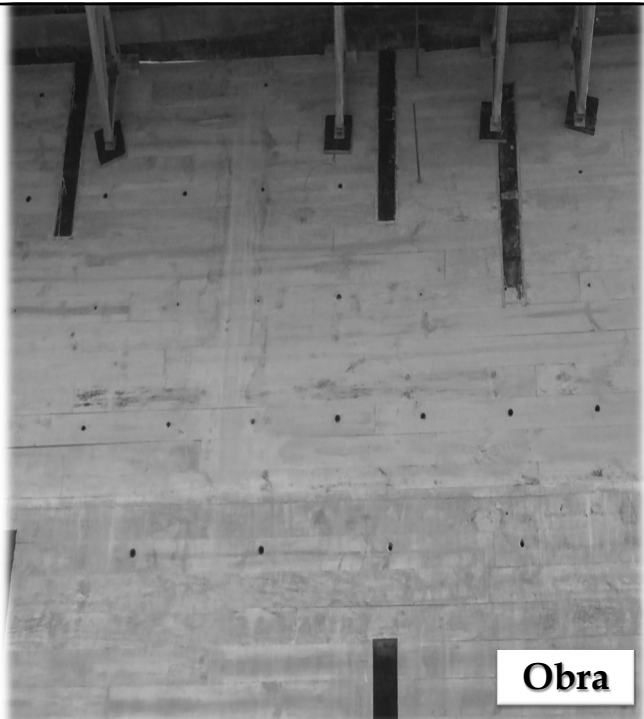
**Junta de
concretagem
incorreta**



Obra

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**Junta de
concretagem
correta**



Obra

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Ruy Ohtake: Instituto Tomie Ohtake

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Ruy Ohtake: Hotel Unique

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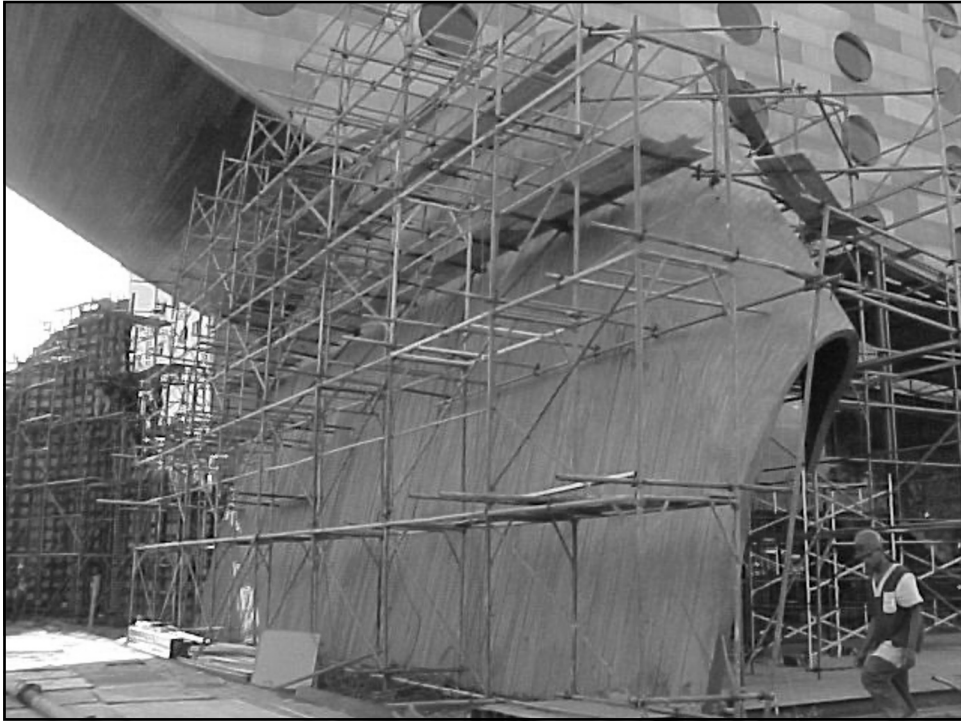
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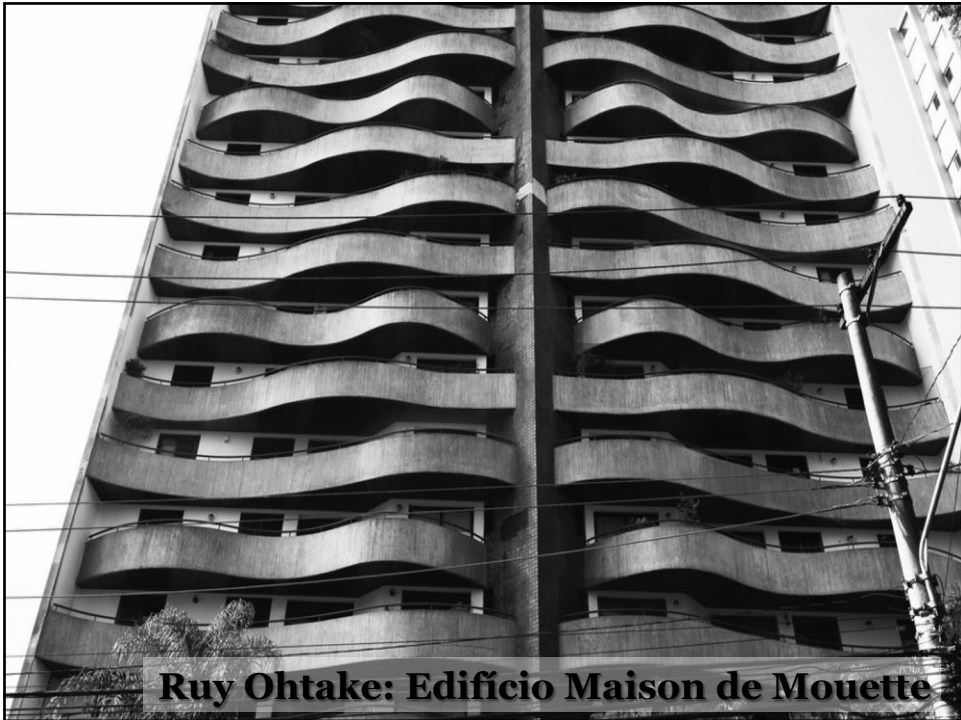
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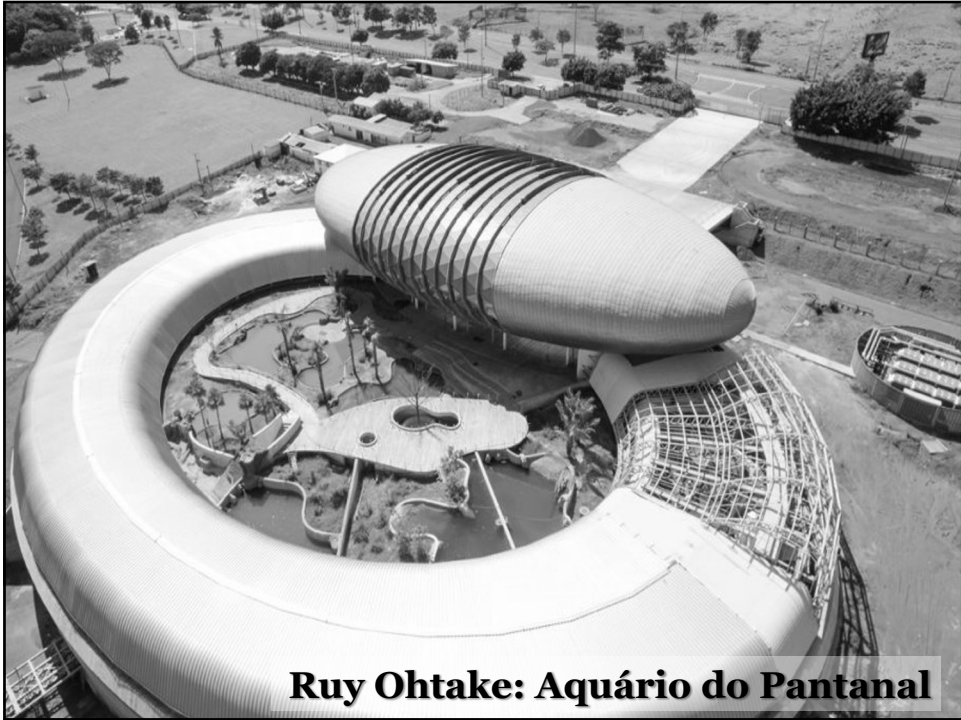


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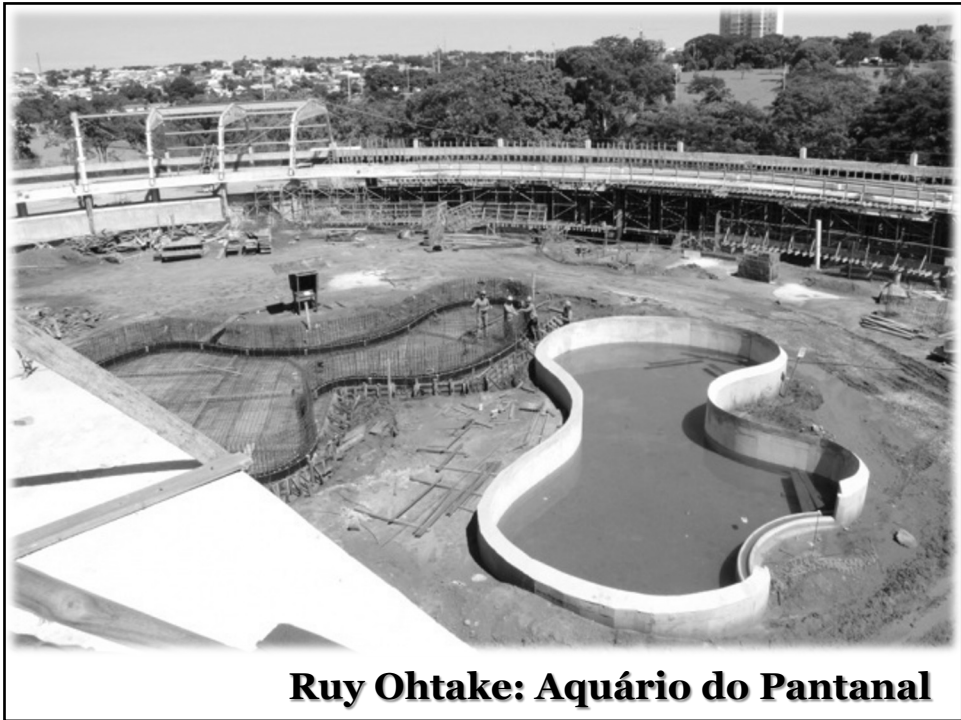
Ruy Ohtake: Edificio Maison de Mouette

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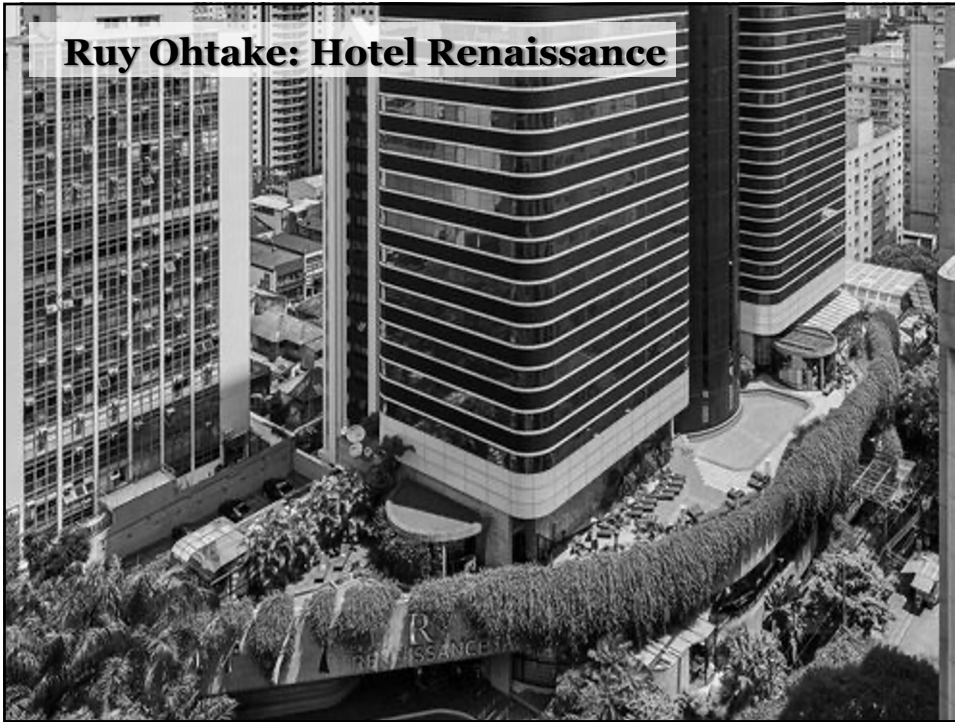
Ruy Ohtake: Aquário do Pantanal

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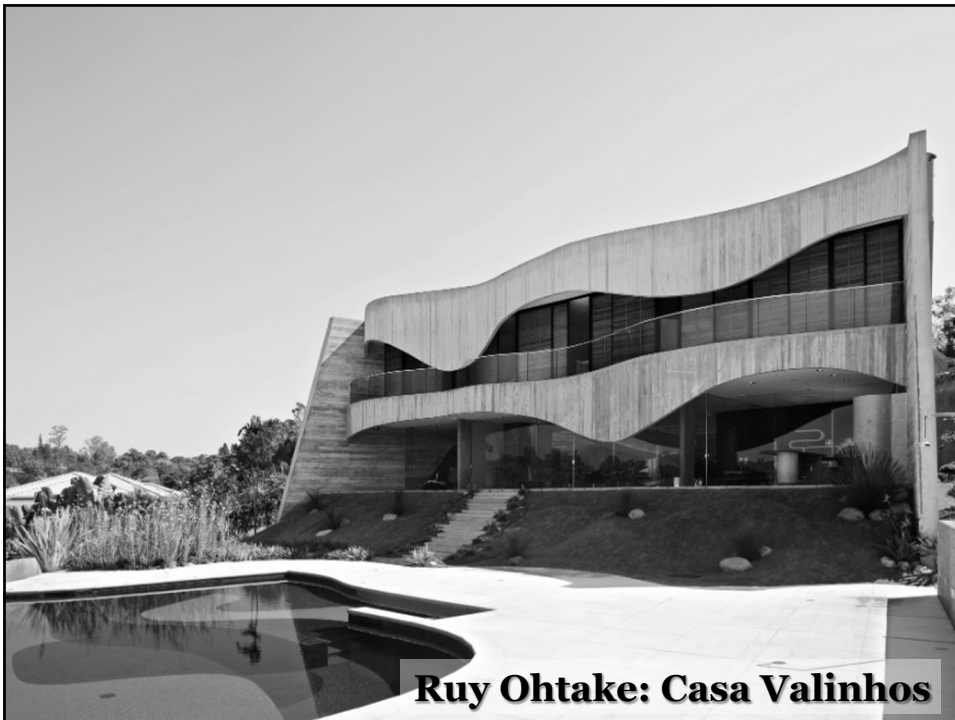


Ruy Ohtake: Aquário do Pantanal

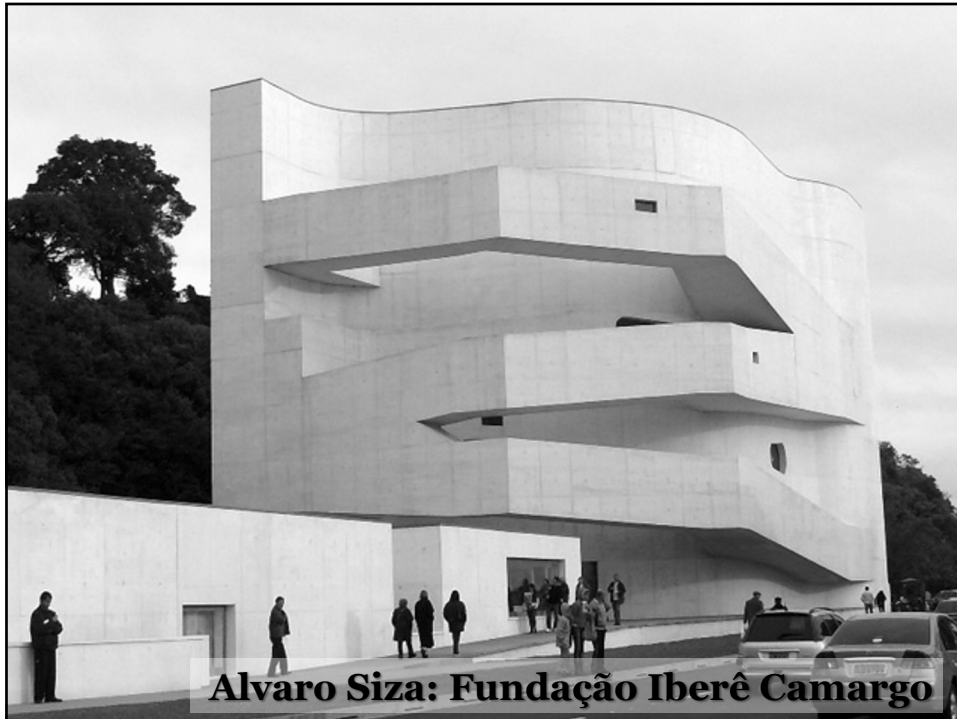
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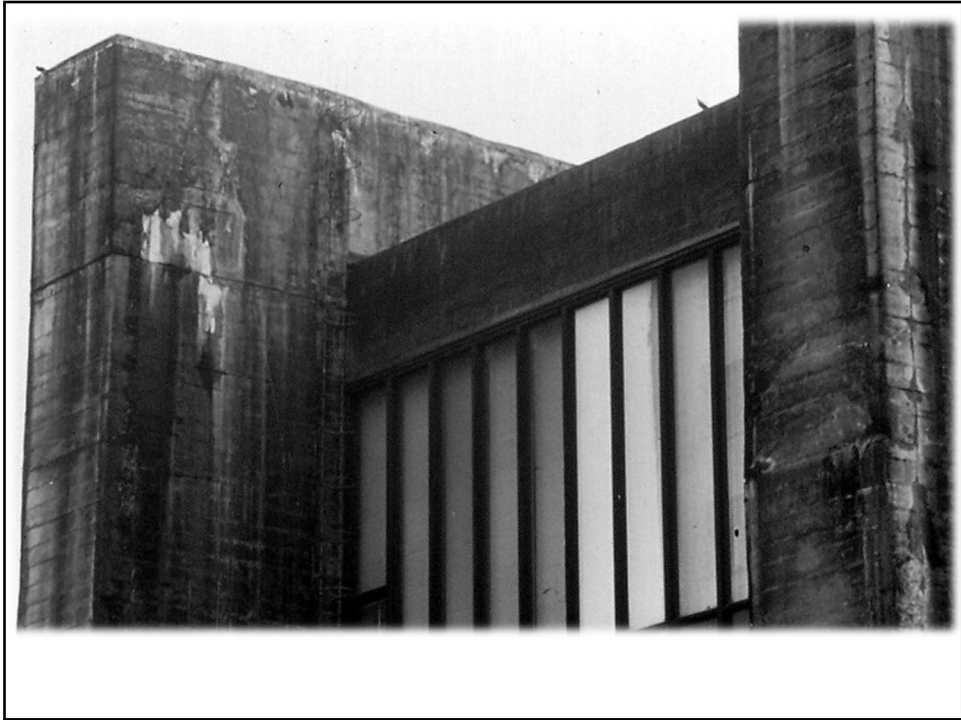
Alvaro Siza: Fundação Iberê Camargo

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Brasil Arquitetura: Praça das Artes

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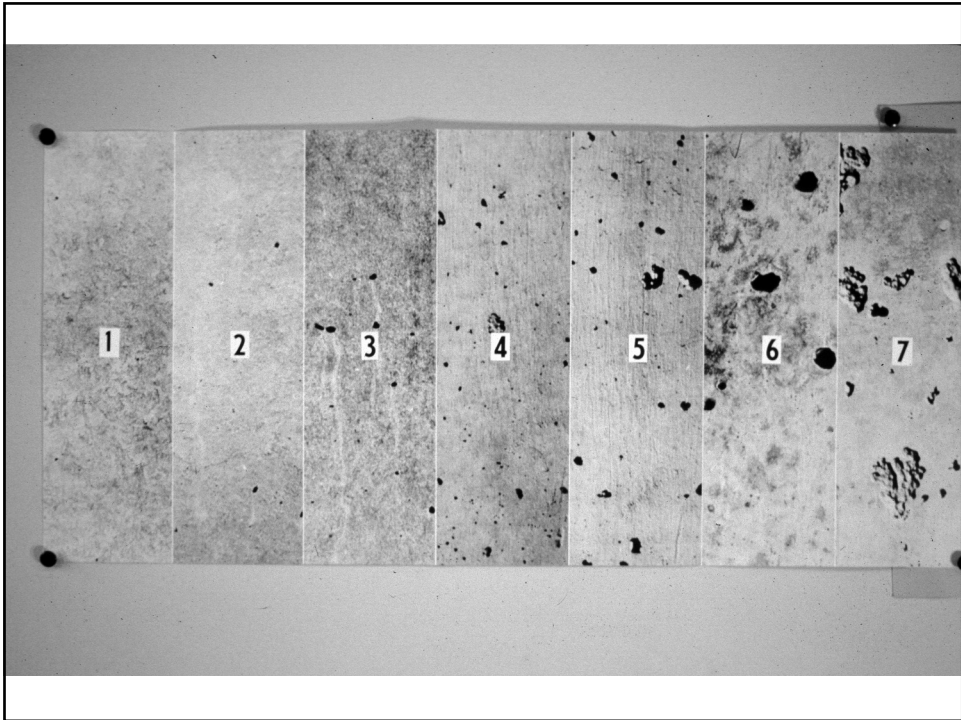
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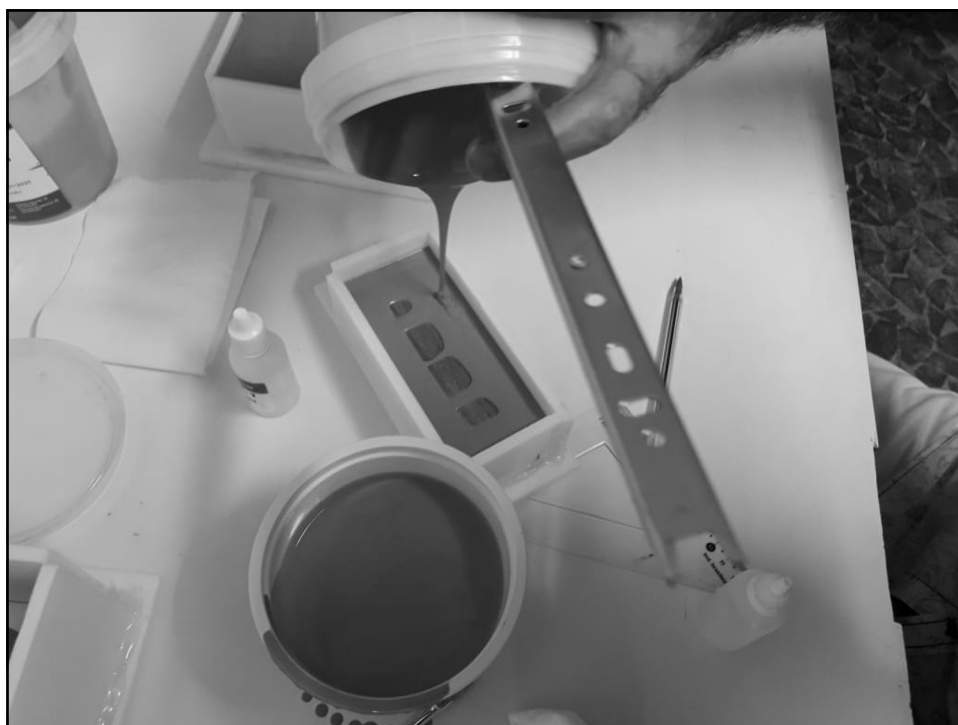


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Experiências



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INSTRUÇÕES PARA O USO DO FABLAB

Escolha da unidade:

<http://www.fablablivresp.art.br/onde-tem>

Inscrições:

<http://www.fablablivresp.art.br/inscreva-seu-projeto>

Como funciona?

- Levar arquivo na extensão .stl (free cad, sketchup);
- Levar filamento PLA 1,75mm (venda pela internet);
- Levar silicone (Redelease);
- Limite máximo da impressora 3D: 20 x 20 x 20 cm.

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"do Laboratório de Pesquisa ao Canteiro de Obras"

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