ALMACO
ASSOCIAÇÃO LATINO-AMERICANA DE MATERIAIS COMPÓSITOS

COMPOSITES MARKET PERFORMANCE INDICATORS

2020 | 2021

President
Erika Bernardino Aprá

1º Vice President
Rodrigo Braga

2º Vice President
Marcelo Aguiar

Term of office
2019-2021

INTRODUCTION

Sectoral performance indicators provide greater assertiveness in viewing trends and creating scenarios. They also strengthen the representativeness and credibility of industries before government agencies and global markets.

Consistent data and market knowledge are essential for business planning and management.

Therefore, the Latin American Composite Materials Association (ALMACO) presents in this report the Composites Market Performance Indicators.

Based on surveys and interviews carried out with members of the entire material production chain, ALMACO consolidated data for 2020 and the sector's projections for 2021.

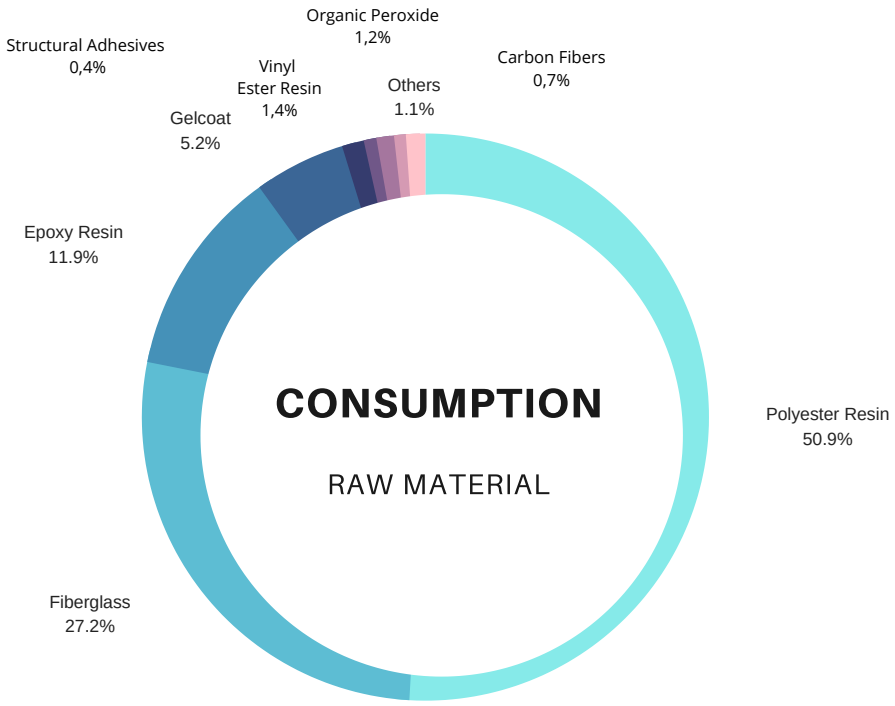
Enjoy reading and, above all, good business involving composites!

Composites pole

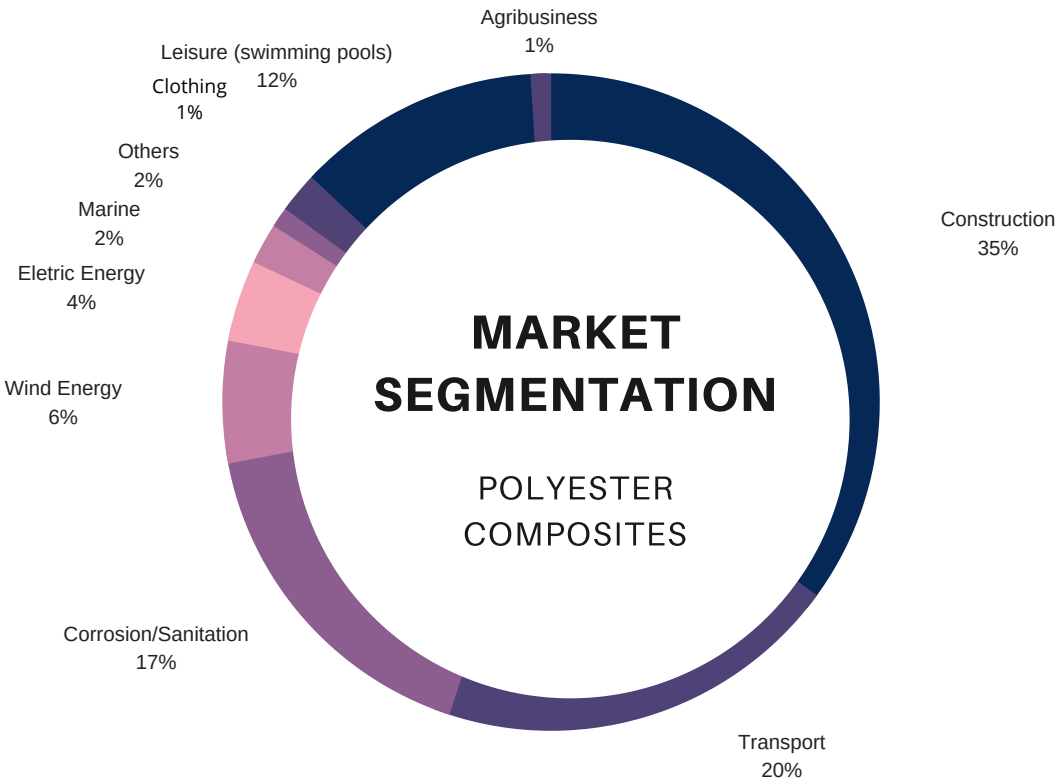
RESEARCH

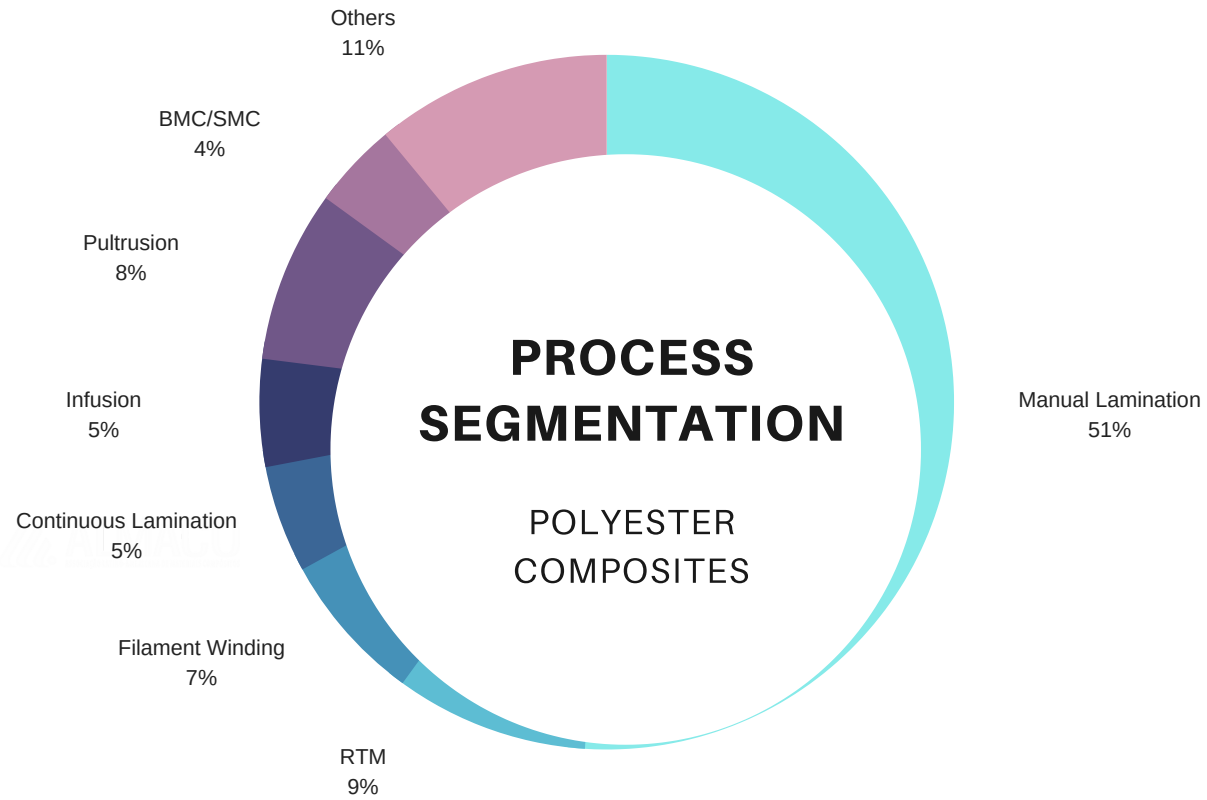
INDICATORS/YEAR	2019	2020	2021*	2019/2020	2020/2021*
PRODUCTION VALUE (MILLIONS/US$)	539	561	650	3,9%	16%
RAW MATERIAL CONSUMPTION (THOUSAND TONS)	218	208	230	-4,6%	11%
JOBS	63,8	62,1	64,2	-2,7%	3,3%
OPERATIONAL LEVEL (%)	62,0	59,0	65,7	-4,8%	11,3%

RAW MATERIAL	VOLUME (KTON)
POLYESTER RESIN	105,8
FIBERGLASS	56,5
EPOXY RESIN	24,8
GELCOAT	11
VINYL ESTER RESIN	2,6
ORGANIC PEROXIDE	2,1
CARBON FIBERS	1,4
STRUCTURAL ADHESIVES	1,2
OTHERS	2,3
TOTAL	208

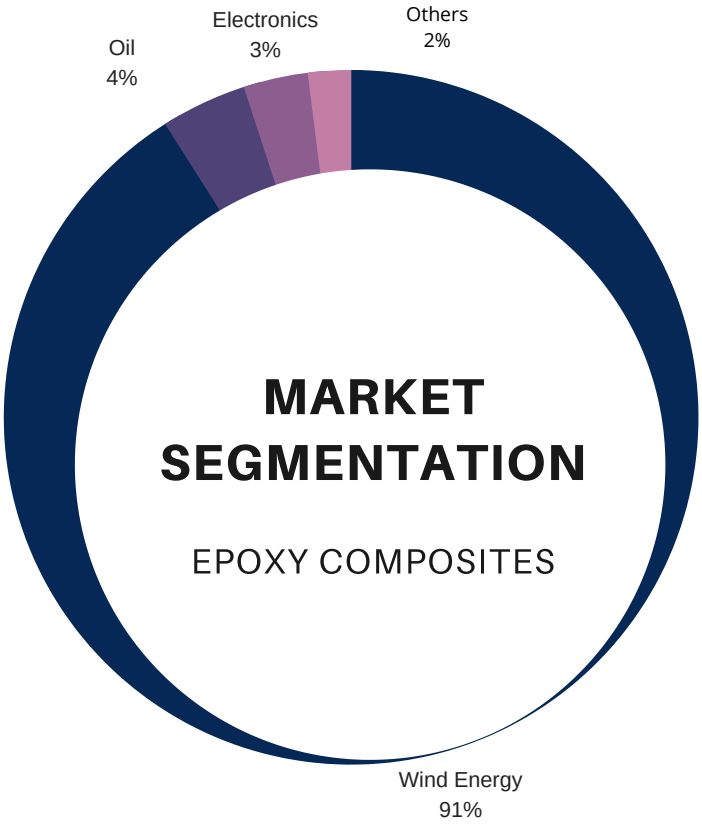


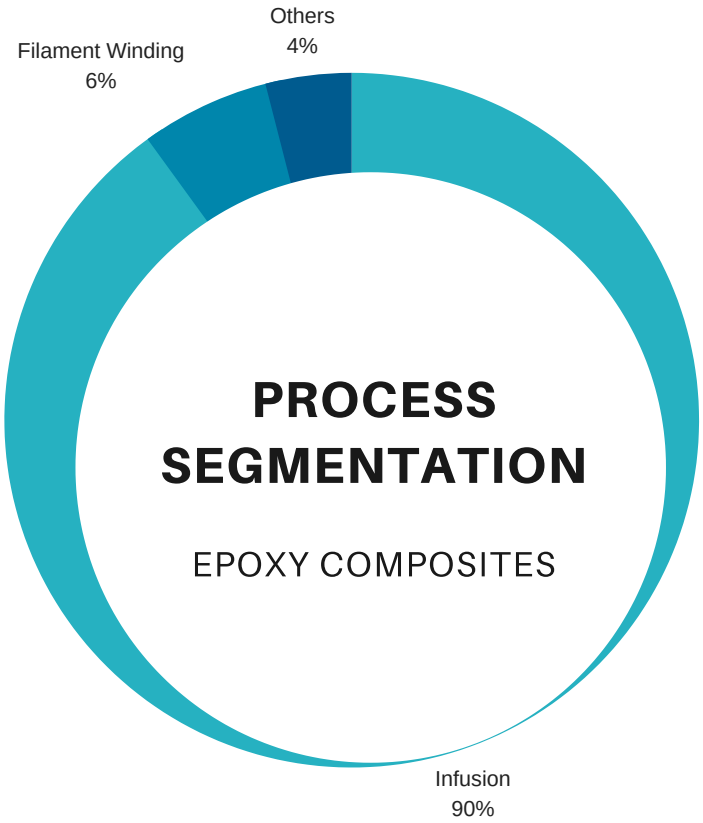
RESEARCH


Agribusiness
1%
Leisure (swimming pools)
12%
Clothing
1%
Others
2%
Marine
2%
Eletric Energy
4%
Wind Energy
6%
Corrosion/Sanitation
17%
Transport
20%
Construction
35%
MARKET SEGMENTATION
POLYESTER COMPOSITES


Others
11%
BMC/SMC
4%
Pultrusion
8%
Infusion
5%
Continuous Lamination
5%
Filament Winding
7%
RTM
9%
Manual Lamination
51%
PROCESS SEGMENTATION
POLYESTER COMPOSITES

RESEARCH


Electronics
3%
Others
2%
Oil
4%
MARKET
SEGMENTATION
EPOXY COMPOSITES
Wind Energy
91%


Others
4%
Filament Winding
6%
PROCESS
SEGMENTATION
EPOXY COMPOSITES
Infusion
90%

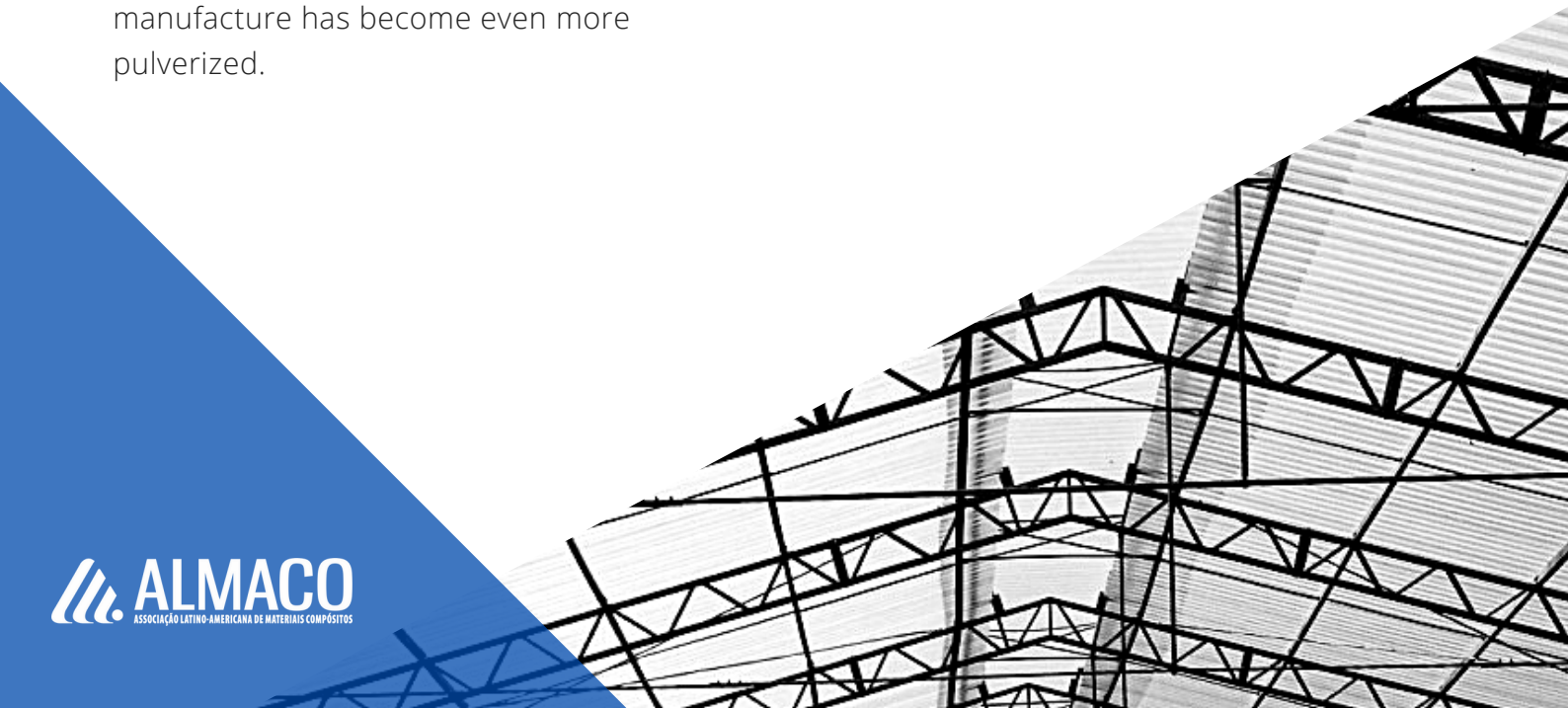
CONSTRUCTION

The construction GDP in Brazil fell by about 3% in 2020 due to the pandemic, even though this was the sector that generated more jobs in the period. Despite the drop in the total, several market segments inserted in construction remained strong for most of last year, and many of them are directly related to composites.

Historical leader in the Brazilian consumption of reinforced plastic, construction industry not only remained at the top but increased its share in a year as atypical as 2020, capturing 35% of the entire processed volume of polyester-based composites. The forced stay at home made many people decide to renovate their homes, a movement boosted by government aid and which increased sales of water tanks and tiles by about 15%, on average, offsetting the drop in demand from the construction of industrial sheds. Also noteworthy is the heating of around 20% in sales of sinks and tanks made of synthetic marble, products whose manufacture has become even more pulverized.

The optimism for 2021 – the Brazilian Civil Construction Chamber (CBIC) projects a 4% jump –, at least for the composites sector, has been clouded by problems in the raw material supply chain, with emphasis on the lack of fiberglass. Large composites manufacturers complain about the reduced quotas of material they can purchase, in parallel with the escalation of prices – which is not, by the way, exclusive to composites. On average, in the first half, resin prices increased 20%, a modest rise compared to the rise above 100% in fiberglass. High exchange rates and rising global demand, especially from Asia, make imports very difficult.

Even so – and despite other factors, such as slow pace of vaccination and the end of the release of auxiliary funds by the government – the consumption of composites in construction grew around 5% in the first half of 2021. The expectation for the year as all, however, is of stability, with the repetition of the result obtained last year.



LEISURE/SWIMMING POOL

Although the National Association of Swimming Pool Companies and Professionals (ANAPP) does not have, so far, official data on the 2020 performance, there is a consensus that last year was the best in history. While social isolation almost zeroed sales of countless products, for the swimming pools, a way to entertain the family without leaving the house, it was the opposite. Some manufacturers have even declared that they have seen their sales grow by 140%.

This explosion in consumption could be felt – and was widely celebrated – by the composites sector. It is estimated that the product was responsible for a consumption of 12 thousand tons of polyester resin, 5 thousand tons of fiberglass and almost 2 thousand tons of gelcoat in 2020.

TRANSPORT

Second largest consumer of composites in Brazil, the transport sector has seen better days. In the case of trucks and implements, the drop in 2020 was mitigated by the umbilical link of this type of vehicle with agribusiness, the only one so far immune to the pandemic. Last year, sales of new trucks dropped 12%, a fall that would have been much higher if it weren't for the colossal amount of grain to be transported in Brazil, a country that combines successive breaks in harvest records with negligible investment in the rail modal.

Despite the negative balance in 2020, the demand for trucks turned the year on a high and remained in a good mood in the first half of 2021, registering a jump of 47% compared to the same period last year. Discounting the low basis of comparison, it is a very positive picture – there is even talk of a lack of trucks in the market. The projection is for growth of 21% this year, music for the ears of the composites production chain.

The bus segment, in turn, was hit hard by the health crisis and, so far, remains knocked out. With road tourism stopped in 2020, the production of new buses dropped 25.6%, a result that interrupted the cycle of recovery started in 2016 and which remained firm, so much so that the expectation for last year was an increase of 15%. On the positive side, only the demand from the charter market, driven by the desire of companies to transport their employees in a more isolated way.

To make matters worse, the first half of 2021 proved to be weaker than the already rickety beginning of 2020, with a 19.6% drop in production volume, result of idling tourism waiting for broader vaccinations and the crisis in the neighboring countries that import buses assembled here. July, for example, was marked by a 27.9% decline, a performance so regrettable that some bus manufacturers decided to take collective vacations. For the year, the forecast is 12 thousand buses manufactured, or 25% below last year's number.

CORROSION/SANITATION

Announced in 2019 as the largest private investment in the last twenty years in the state of São Paulo, the US$ 1.4 billion expansion of Bracell's pulp plant in Lençóis Paulista ensured the operation of most of the tanks, pipes and special composites equipment manufacturers last year. If it weren't for Projeto Star, the name of the shot given by Bracell, the market specialized in transforming vinyl ester resins into solutions against corrosion would be practically stopped, as a good part of the projects planned were postponed due to the pandemic.

With the turn of the year, projects and maintenance postponed in 2020 were taken out of the drawer throughout the first half of the year, so much so that the demand for composites for applications in corrosive environments rose about 20%, with emphasis on orders made by chemical industries alcohol and sugar plants. This rhythm should be maintained until December, but it's not all flowers. Scarcity of raw materials – fiberglass – and important increases in prices – fiberglass and resin – have directly impacted the profitability of the manufacturers. The situation is not worse because steel, a direct competitor to composites, has never been so expensive.

In the area of sanitation, the big news for 2020 was the publication (at last!) of the Regulatory Mark. In general terms, the law determines that, by 2033, 99% of the Brazilian population must be served with treated water and 90% with sewage collection and treatment. The composites sector gave a standing ovation, after all, 24 states in the federation need to increase their investments to meet the requirements of the new legislation.

For now, some signs are already being felt by the material's production chain, especially by micro-enterprises, which are preferred by public agencies in bidding processes. An increase in the demand for tanks and pipes that will be part of water and effluent treatment plants of large companies has also been noted – one year after the approval of the mark, 33% of investments in sanitation came from the private sector. Another highlight was the heating up of the sales of composites reservoirs for water storage in residential condominiums.

ENERGY

In Brazil, poles are the highlight of the applications of composites in electrical energy. The demand in 2020 grew around 10%, largely due to the large projects closed a year earlier – CPFL, NeoEnergia and ENEL, together, invested around US$ 30 million in the period. Manufacturers are estimated to have produced 160,000 composites poles last year, with less than 4% of that amount exported.

In the first half of this year, production walked sideways. First, because power utilities companies are seeking financial rebalancing with the National Electric Energy Agency (ANEEL), after tariffs were reduced during the pandemic. This meant a barrier to new projects. Second, because older contracts were rendered unfeasible due to the rise in raw materials – some players have preferred to paralyze their lines to continue producing with values agreed before the increases. Therefore, overall, 2021 should close very similar to last year in terms of the volume of poles manufactured.

Regarding wind energy, the majority field for applications of epoxy-based composites, but not only – it is estimated that 6,000 tons of polyester resin are consumed by this sector annually in Brazil –, 2020 was a good year. The country received 66 new parks and another 14 were repowered, increasing power by 14.89% (total of 17.75 GW). In all, 647 wind turbines were installed in four states, an increase of 114% compared to 2019. And the scenario could have been even better were it not for the interruption of auctions, as a result of the drop in energy consumption due to the pandemic.

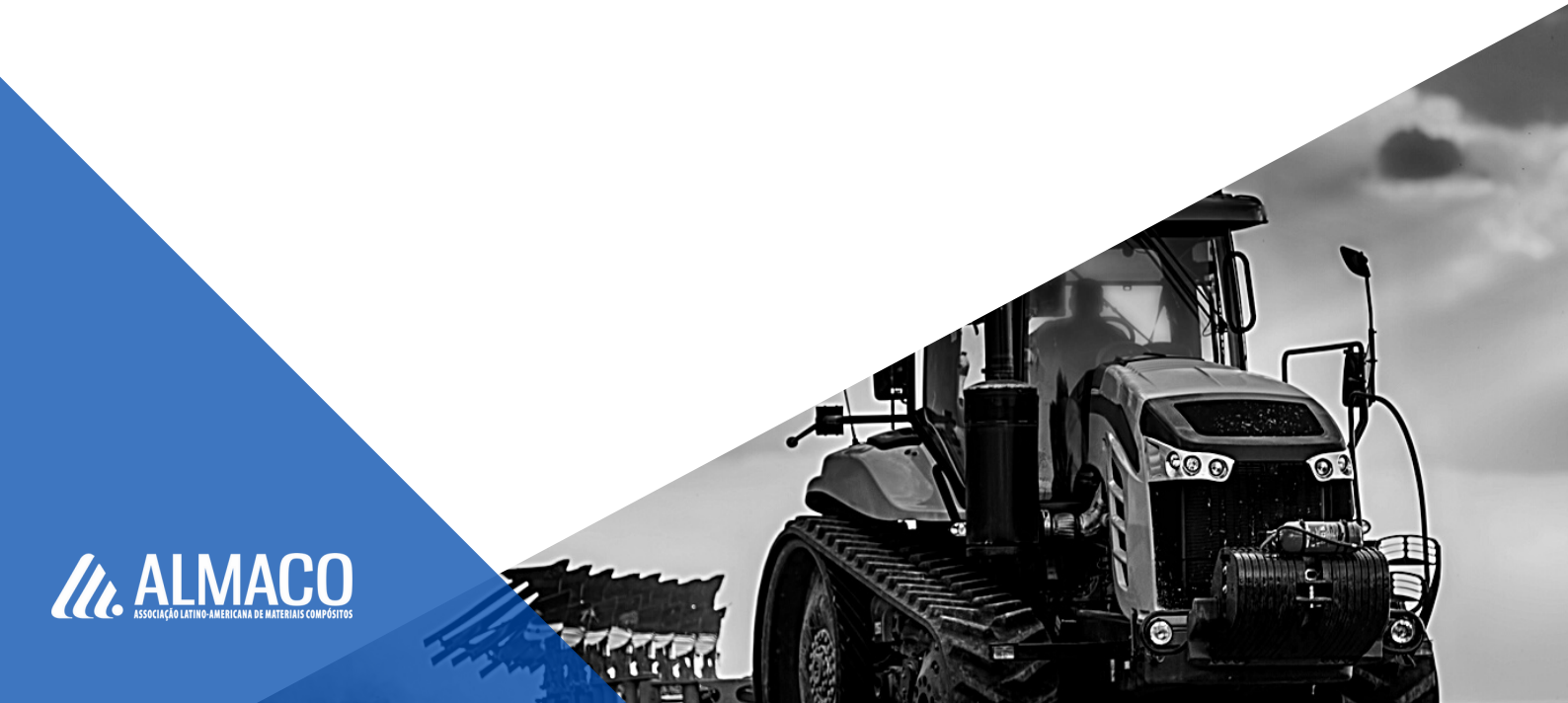
The first half of 2021 marked the beginning of operation of 49 new wind farms, which bring together 444 wind turbines. For comparison purposes, in the same period last year there were 21 new wind farms and 190 wind turbines. Added to the expansions in the parks already in operation, by July Brazil had 537 more wind turbines, and the expectation is that 2021 will end with 748 wind turbines, an increase of 15% compared to 2020.

AGRIBUSINESS

2020, a year to be forgotten by almost all sectors of activity, will remain in the memory of Brazilian agribusiness due to the record growth of 24.31%. With this result, the field expanded to 26.6% its participation in the total GDP of Brazil – in 2019, it was 20.5%.

Given such glittering numbers, it's no wonder that sales of agricultural machinery and implements last year grew 27%, a move that pushed up the results of composite hoods, roofs and fenders, among other tractor components, harvesters and other agricultural vehicles.

For the year, agribusiness sensors point to an evolution of around 5%, a move that will help not only manufacturers of parts for implements but also truck assemblers, which have not only turned the page in 2020 but have been running practically at full capacity since the beginning of 2021.



CLOTHING INDUSTRY

In the clothing market, composites appear in the form of buttons, products whose industry was one of the most affected by the pandemic. Closed trade or operating in restricted hours and the money being spent on food, renovations and home entertainment brought down the consumption of clothing by 23% last year.

Result: around 50% drop in demand for locally made buttons. It is worth noting that imported buttons already account for 40% of Brazilian consumption and that around 60% of the clothes sold here are imported, that is, they are pieces that already come with buttons.

After the nightmare lived in 2020, the situation began to improve in the first quarter of this year, until new closures of the trade were determined by the public administration and, with that, the sale of buttons again plummeted.

With the mass vaccination and the reopening of commercial establishments, the expectation of manufacturers is to close the year tying with the result of 2019.

MARINE

The search for more confined leisure in times of pandemic boosted the sale of boats by 20% last year, a move that caused queues of up to four months for the delivery of boats, especially models above 30 feet (about 9 m). Many shipyards, especially those that move in the high luxury lane, have their production taken until the end of 2021.

It is evident that all this movement has positively reflected in the result of raw material suppliers for the shipyards, even though the marine sector historically represents very little in the Brazilian composites industry as a whole.

In any case, it is a promising segment, especially considering the size of the Brazilian coast and the still very low per capita ratio of boats in the country – 700 thousand leisure boats for a population of 210 million inhabitants.

ARGENTINA

The Argentine economy was already doing badly before the pandemic broke out. With the onset of the sanitary crisis, then, tango went out of tune and it was impossible for the local composites market, estimated at 40 thousand tons a year, to escape unscathed.

This situation lasted throughout the first half of 2020, until, in August, there was an aggressive recovery, a move that helped to offset the initial drop and to close the year in a relatively balanced manner. Among the composites market segments that performed best in 2020, emphasis on the leisure area, boats, swimming pools and renovations in general. On the other hand, civil construction, infrastructure and sanitation, all very dependent on the release of scarce government funds.

With the country still suffering repeated lockdowns in the first half of 2021, the Argentine economy remained in recession. In any case, the local composites market continues to operate to deliver projects contracted at the beginning – or even before – of the pandemic, counting the hours for the country to fully reopen and return to normality.

CHILE

Umbilically linked to the mining and salmon fishing industries – two major consumers of composites –, the Chilean economy was relatively protected by government actions during the pandemic. For example, all companies that somehow operate in these two markets had special authorization to continue with their doors open. Thus, the impact in the composites sector, especially in the consumption of vinyl ester resins for mining applications, was hardly felt.

Still on last year, it is worth mentioning the unprecedented government incentive in the form of tax refunds, a way found by the public administration to move the economy. The unexpected feature made the consumption of composites swimming pools and bathtubs reach almost the height of the Andes Mountains.

This year, however, started off lukewarm, as announcements of new projects are slower. The composites market is expected to maintain its historical average of 30,000 tons processed in the year, eagerly awaiting the approval of investments in water desalination plants. There are ten such projects in the Chilean government's drawer, each of which will require something around 500 tons of composites in the form of pipes, tanks and accessories.

COLOMBIA

Estimated at 35 thousand tons/year, the Colombian composites market was heated up until the beginning of the pandemic, driven by applications in transport, energy, sanitation and marine. Demand fell across the board between March and July, until it was picked up in August, thanks to two actions by the local government that sounded like music to the composites production chain.

Due to social distance, the Colombian public administration decided to expand internet access to the most remote areas of the country. With this measure, there was a boom in the sale of composite poles. In parallel, the government acquired more buses, so that the vehicles could run with an occupancy of up to 35% and, thus, respect safety protocols. Result: tons of resins and fiberglass transformed into frontal masks and roofs, among other vehicle parts.

The first half of 2021 was very positive, with an evolution of around 15% compared to the result of the same period last year. It could have been double, were it not for the scarcity of raw materials and the dizzying price rises – in some cases, above 100%.

ALMACO

Founded in 1981, ALMACO's mission is to represent, promote and strengthen the sustainable development of the composites market. With central administration in Brazil and regional headquarters in Chile, Argentina and Colombia, ALMACO has around 400 members (companies, entities and students) and maintains, together with the Institute for Technological Research (IPT), the Composites Technology Center (CETECOM), the largest of its kind in Latin America.

Resulting from the combination of polymers resins and reinforcements – for example, fiberglass –, composites are known for their high levels of mechanical and chemical resistance, associated with design freedom. There are more than 70,000 applications cataloged around the world, from water tanks, pipes and wind blades to parts for boats, buses, trains and planes.

www.almaco.org.br
+55 11 3719-0098
marketing@almaco.org.br