ALMACO
ASSOCIAÇÃO LATINO-AMERICANA DE MATERIAIS COMPÓSITOS

COMPOSITES MARKET PERFORMANCE INDICATORS

2022

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Term of office
2022-2024

INTRODUCTION

Sector 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 2021 and the sector's projections for 2022.

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

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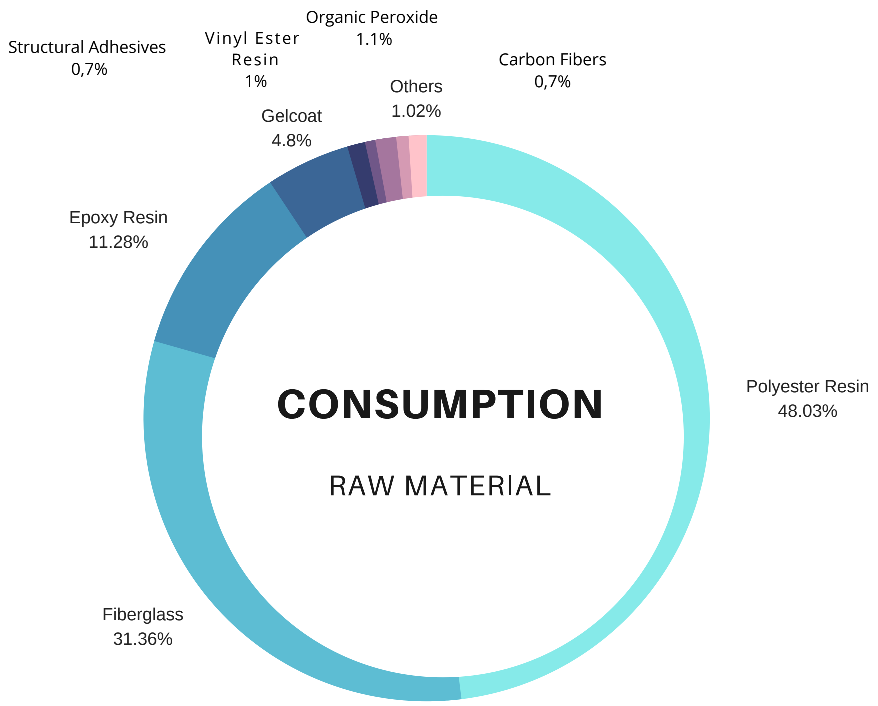
Composites pole

RESEARCH

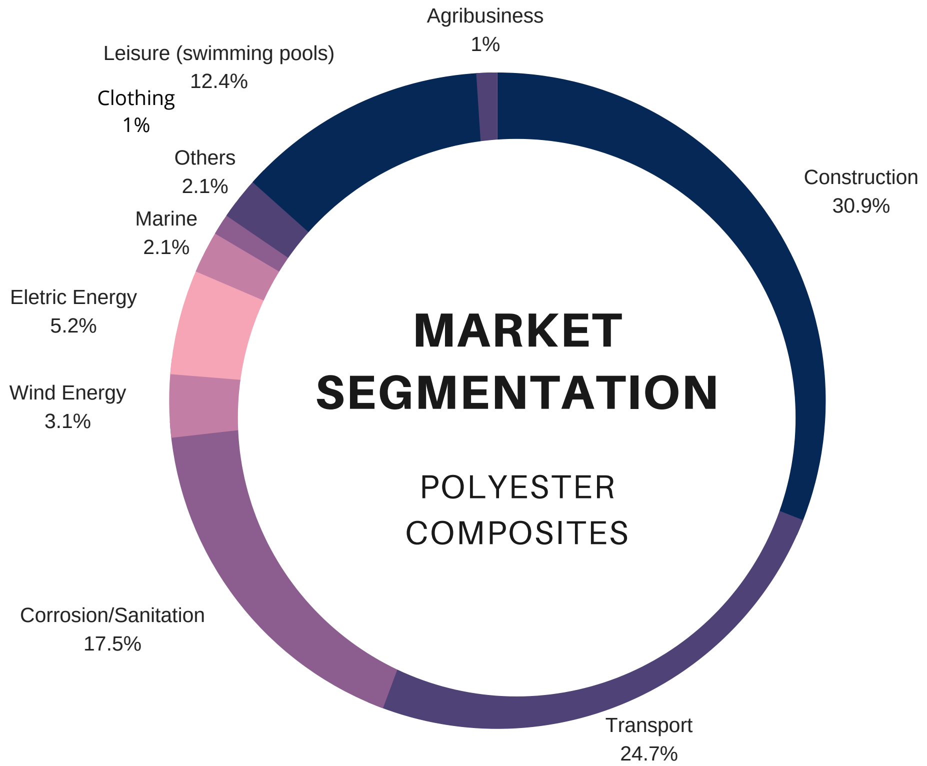
INDICATORS/YEAR	2021	1S 2022	1S 2022 / 1S 2021	2022*	2021/2022*
PRODUCTION VALUE (MILLIONS/US$)	769	359	17%	922	20%
RAW MATERIAL CONSUMPTION (THOUSAND TONS)	245	117	-4,2%	239	-2,5%
JOBS	67,9	66	-2,8%	67	-1,3%
OPERATIONAL LEVEL (%)	71,0	68,0	-4,23	69,0	-2,8%

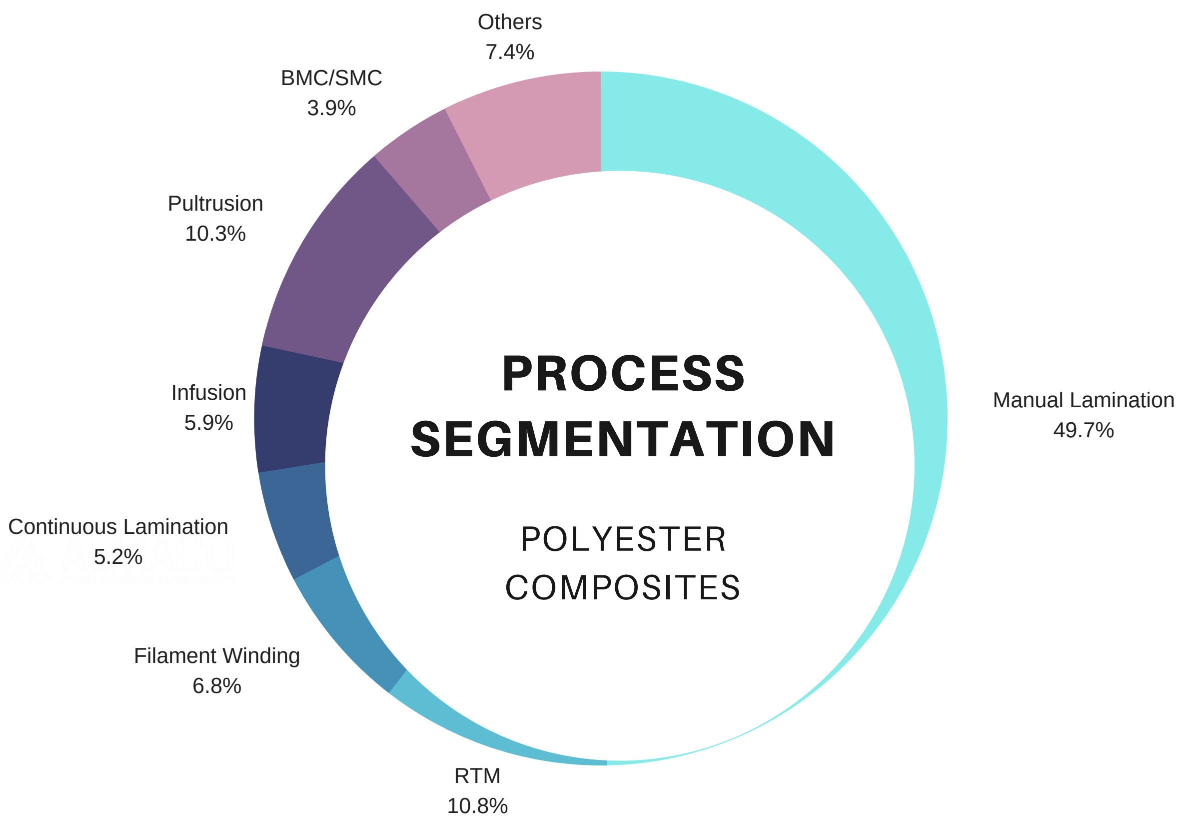
(*) PROJECTION

RAW MATERIAL	VOLUME (KTON)
POLYESTER RESIN	56,2
FIBERGLASS	36,7
EPOXY RESIN	13,2
GELCOAT	5,6
VINYL ESTER RESIN	1,2
ORGANIC PEROXIDE	1,4
STRUCTURAL ADHESIVES	0,7
CARBON FIBERS	0,8
OTHERS	1,2
TOTAL	117

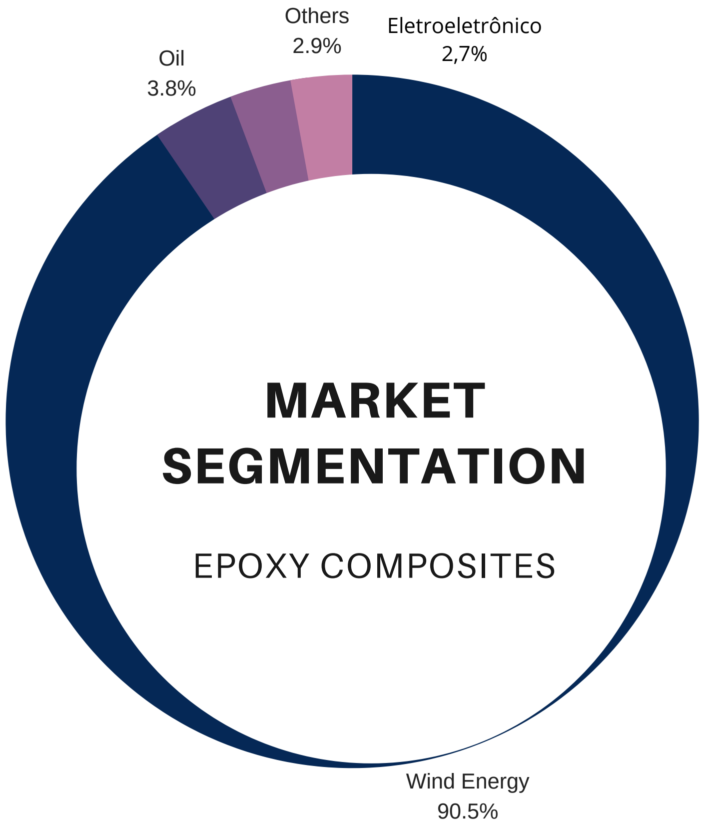


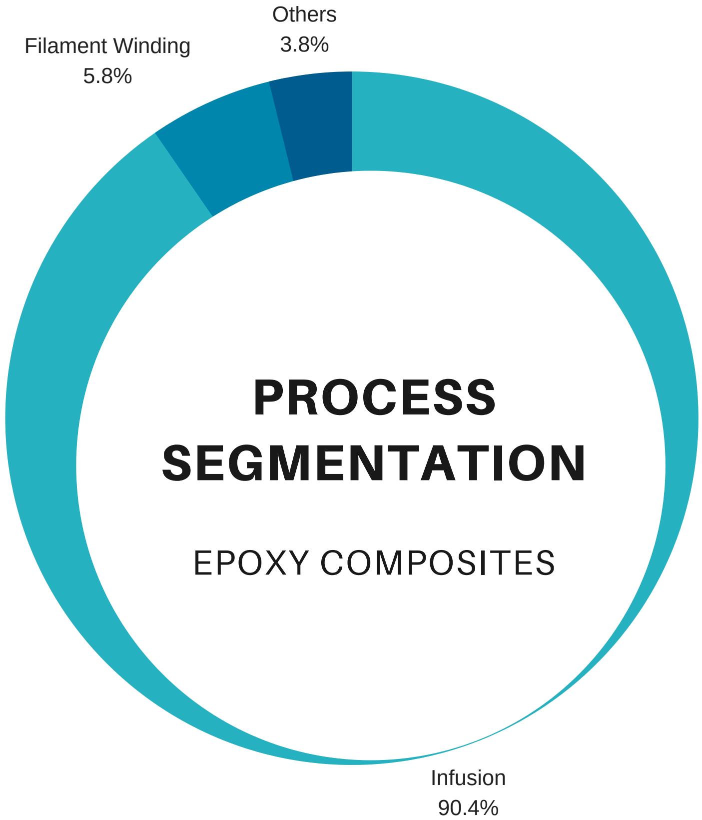
RESEARCH


Agribusiness
1%
Leisure (swimming pools)
12.4%
Clothing
1%
Others
2.1%
Marine
2.1%
Eletric Energy
5.2%
Wind Energy
3.1%
Corrosion/Sanitation
17.5%
Transport
24.7%
Construction
30.9%
MARKET
SEGMENTATION
POLYESTER
COMPOSITES


Others
7.4%
BMC/SMC
3.9%
Pultrusion
10.3%
Infusion
5.9%
Continuous Lamination
5.2%
Filament Winding
6.8%
RTM
10.8%
Manual Lamination
49.7%
PROCESS
SEGMENTATION
POLYESTER
COMPOSITES

RESEARCH


Others
2.9%
Eletroeletrônico
2,7%
Oil
3.8%
MARKET SEGMENTATION
EPOXY COMPOSITES
Wind Energy
90.5%


Others
3.8%
Filament Winding
5.8%
PROCESS SEGMENTATION
EPOXY COMPOSITES
Infusion
90.4%

CONSTRUCTION

Despite recent revisions in the civil construction GDP – from 2.5% to 3.5% – motivated mainly by the Casa Verde e Amarela housing government program, this optimism has not yet appeared in the composites sector.

On the contrary, the 4.2% drop in the total volume produced in the first half compared to the same period in 2021 is largely due to the decrease in demand from the construction market, leader in Brazilian consumption of composites.

As for the reasons for this mismatch, we highlight the combination of less money circulating between classes C and D and the growth of inflation. With less purchasing power, the public that drives sales of synthetic marble and water tanks, icons of composites in construction, has practically disappeared from home centers. To the point that large manufacturers of sinks and washbasins saw their production shrink by about 50% between January and June.

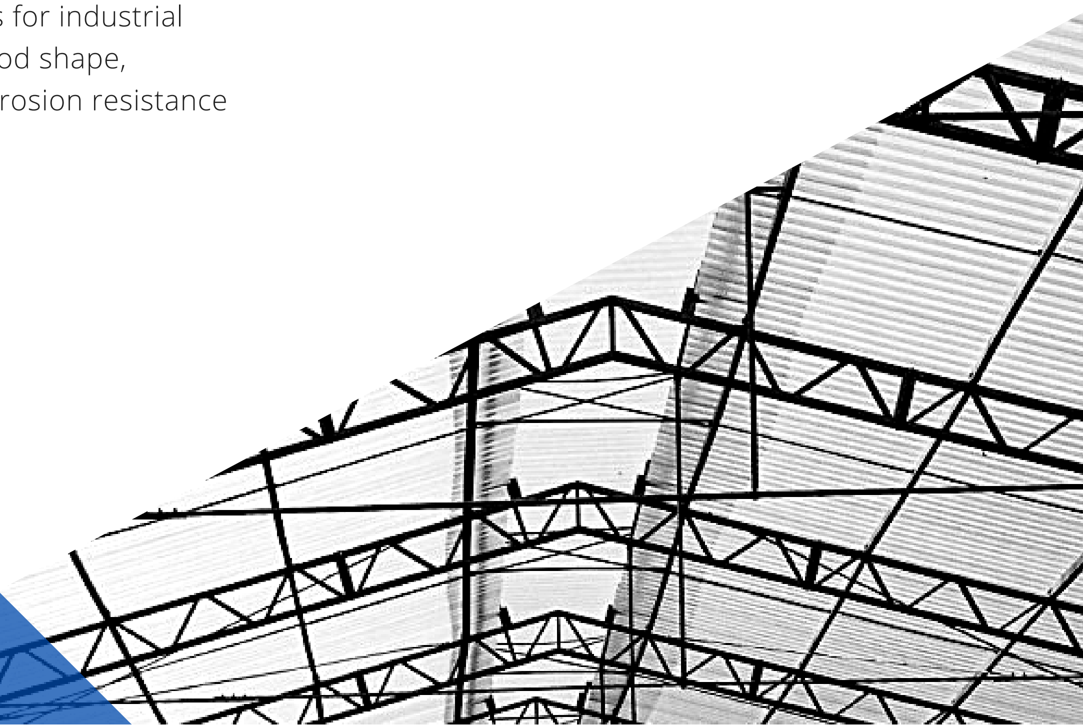
However, there are exceptions. The manufacture of roofing tiles for industrial and logistical sheds is in good shape, especially when greater corrosion resistance is required.

The positive bias also appears when the subject is composite rebar, an application that is still incipient in Brazil, but which has everything to boom in the coming years.

It is worth noting, hence taking into account virtually all market segments, that comparisons with 2020 and 2021 will always be affected by the incredible fluctuations caused by the pandemic.

From stalled markets at the beginning of the health crisis to explosions of consumption months later, almost no activity has gone unscathed. An example? The “stay at home” mantra catapulted the number of renovations and, as a result, the sale of building materials. Today, with people back on the streets, money, which is shorter, needs to be shared with other expenses. Hence, the reforms are left for later.

For 2022 as a whole, supported by a historically better second semester than the first, the composites sector expects consumption from the construction industry to tie with the 2021 result.



LEISURE/SWIMMING POOL

There is no good phase that lasts forever, proves the result of this first semester of the swimming pool market. It is estimated a retraction of around 10% in sales compared to the same period last year, a time, by the way, that already showed signs that the party started in 2020 was ending.

With the outbreak of the pandemic, many people decided to invest in the acquisition of a swimming pool and, with it, in more reserved leisure hours. But the same family does not buy different pools every month. In parallel, with the huge increases in the prices of resins and glass fibers in the last two years, the product became more expensive – and, with inflation, the consumer became poorer.

One of the several data that confirm this analysis is the growth in the production of white gelcoat, traditionally used in pools with higher prices, to the detriment of blue for the same application. In other words, the lower middle class, customer of the traditional models – blue and measuring 2.5 m x 5 m – has given space to the public that has more money, but is much smaller in size. Another factor that helped to reduce the pace of sales was the harshest winter recorded this year.

In any case, the manufacture of swimming pools accounted for 12.4% of the consumption of polyester resin in the first half of the year. Brazil currently has almost 4 million swimming pools installed – it is second in the world ranking – and this industry generated US$ 2,3 billion in 2021, according to the National Association of Swimming Pool Companies and Professionals (ANAPP).

TRANSPORT

Started in 2021, the bus industry recovery continues in fifth gear, great news for the composites production chain – the material shapes roofs, panels and frontal masks, among other pieces. In the first semester, production totaled 8,152 units, 31% more than in the same period last year – the domestic market accounted for 6,599 units.

After the nightmare experienced in 2020 and part of 2021, road models grew the most with the resumption of tourism: 72% in the first half of this year. Also weighing in favor was the migration of the public from the air sector to the road sector, frightened by current ticket prices, and the rise in fuel prices, which led more passenger car owners to opt for intercity bus travel.

On the other hand, urban models had their sales positively impacted by subsidies from more than one hundred municipalities, which helped companies in a pre-bankruptcy situation to renew their fleets as provided for in contracts.

Also highlighted for the anticipation of purchases due to the entry into force, in January 2023, of the Euro 6 emission standard (buses complying with the new standard are more expensive). And the result just wasn't better – and this also applies to road models – due to the lack of semiconductors and chassis.

Umbilically connected to school transport, the minibus sector is also recovering, after two years out of service. For the government program Caminho da Escola alone, 10,000 units should be tendered in 2022. Thus, it is estimated that the bus market will grow 31%, totaling something close to 21,000 units.

The lack of components has also affected truck makers, despite the booming agricultural sector. So much so that the result for the first half fell by about 1% compared to the same period last year. However, unlike buses, truck sales were off a blazing 43% jump in 2021.

Faced with this irritating instability in the supply of components, the truck sector revised its projections: from 7.3% growth to a modest tie with the volume registered last year.

CORROSION/SANITATION

The sharp rises in the prices of glass fibers and resins, especially vinyl esters, have shelved a series of maintenance projects in industries that deal with chemical products. This was directly reflected in the balance sheet of manufacturers of composite tanks and tubes.

In parallel, thanks to the delay of around five months in the start-up of a major project in the pulp and paper market, the volumes expected for the first half of the year did not materialize. Result: drop of around 20% compared to the first half of last year.

Until December, with the entry on the scene of this paper and cellulose industry project, the situation improves, also helped by the high demand for tubes for the transport of vinasse. Even so, the consumption of composites in the corrosion segment is expected to be 8-10% lower in 2022.

Regarding basic sanitation, two years after the approval of the Legal Mark for Sanitation, the reflexes of the unlocking of new PPPs (public-private partnerships) are beginning to be noticed. In 2022, 57 PPPs are in the stages of public consultation initiated and bidding closed.

Therefore, even though the demand for composites arising from the sanitation market is currently much more concentrated in private works – treatment plants installed in companies, condominiums and shopping malls –, the expectation for the coming years is of excellent news related to the capture of water and sewage treatment.

ENERGY

The manufacture of composite poles and crossarms continued at an accelerated pace during the first half of 2022, a speed that could have been even greater if there weren't constant rises in raw material prices, which ended up, in certain contracts, making the use of the material unfeasible.

In this application, composites suffer from an always higher price than concrete and wood. However, its cost-benefit ratio is infinitely superior, but not all energy service concessionaires, for example, are able to understand the decanted concept of added value.

From January to June, it is estimated that 100,000 posts were produced, a number that could reach 150,000 in the second half of the year. Energy distribution networks (medium voltage) led consumption, with a share of 75%, ahead of substations (10%), energy input (5%), public and private lighting (5%), telecommunications (2%) and others (3%).

Regarding wind energy, the country was surprised by the news, in July, that GE will interrupt the supply of wind turbines in Brazil – the projects already contracted will be fulfilled. Even so, the decision sounded a general alert in the production chain of blades and other components, such as nacelles and spinners.

LM Wind Power, the only one that uses polyester resin in the manufacture of blades - the others are epoxy -, reduced its demand by around 20% in the first half of the year, due to problems in accessing glass fibers and the stop for changing moulds. Until December, however, the expectation is that the company will return to its normal rhythm.

In the first half of the year, 395 wind turbines were installed, 27% less than in January/June. of 2021. For the year, the sector projects the entry into operation of 551 wind turbines and 73 wind farms, which will mean, respectively, a drop of 43% and 34% in 2022.

Even so, during the first half of the year there was a 12% increase in demand for composites from the wind power generation industry, with an important part of this leap being credited to exports. Today, Brazil has 812 active wind farms and more than 9,200 wind turbines in operation, which guarantee an installed capacity of 22 GW.

These numbers tend to jump in the near future, with the publication of a government decree that clarifies the offshore exploration. In fact, the Latin American Composite Materials Association (ALMACO) and the Brazilian Wind Energy Association (ABEEólica) signed an agreement in July to boost the growth of offshore wind energy in Brazil.

AGRIBUSINESS

It is not by chance that Brazil is known abroad as “Big Farm”. Agribusiness, the engine of the local economy – accounts for about 1/3 of GDP – recorded a 29.4% rise in the value of exports in the first half, totaling US$ 79.3 billion. In volume, a more modest increase of 1.3%.

It is worth remembering that the phase experienced by rural agribusiness is so splendid that, of the ten companies in the sugar and alcohol and agriculture segment with publicly traded shares, four of them made their IPO in 2021.

Thus, in addition to being capitalized, the field continues to boost the sale of agricultural implements and, with it, the demand for hoods, sides and roofs for tractors and harvesters, among others. Until April, for example, the turnover of agricultural machinery manufacturers had registered a high of 36% compared to the same period last year.

Note: there are still many unexplored applications of composites in this sector in Brazil, such as solutions for the storage of raw material.

CLOTHING INDUSTRY

China and its late lockdown were music to the ears of Brazilian button makers, who noted a sales increase of around 35% over the first half of the year.

The pace should continue to accelerate during the second half of the year, a period traditionally animated with the approach of summer, when more clothes are sold.

However, this segment has not only been experiencing good news, martyred by the pandemic like few others. The lower circulation of people reddened the balance of the clothing industry and, as a result, several Brazilian button manufacturers closed their doors or entered into judicial recovery.

MARINE

Starting in May, shipyards began to feel some accommodation in demand, after the explosion of consumption during the pandemic, which resulted in unprecedented – and long – waiting lines for those interested in enjoying a boat that smelled like new.

The current scenario was also fueled by inflationary pressure, which leads the potential buyer to review the boat purchase and protect their money in applications that yield above inflation.

At the same time, the rise in the prices of raw material, taking into account not only resins and glass fibers, but raw materials in general, reduced the impetus of the part of the public that buys boats - the least paid part, by the way.

ARGENTINA

From January to June, Argentina recorded an increase of around 3% in the consumption of composites, and this was largely due to demand from the public sector (sanitation), telephony infrastructure (poles) and transport (bus).

For the year as a whole, the expectation is for a growth of 5% compared to 2021, largely because the habits started in the pandemic still remain active in Argentine society – that is, residential renovations and leisure. The release of government funds for sanitation works is also expected.

Macroeconomic issues, such as the devaluation of the local currency and high inflation, keep the demand for products active – durable goods – that represent the conservation of the value of money, and this can positively impact the production chain of composite materials.

CHILE

In May, Chile revised its GDP growth estimate for 2022, from 3.5% to 1.5%. The slowdown is due to the fall in domestic demand, in the wake of an inflation of 8.9% forecast for the period, a situation practically unprecedented for Chileans.

This year, the composites market in Chile should continue to be around 30,000 tons, a figure that could be changed if government funds remain for investment in water desalination plants.

Regarding copper production – the country is the world's largest producer of the ore –, more expensive resins, especially vinyl esters, can postpone maintenance and expansion projects.

COLOMBIA

During the first half of the year, the infrastructure and basic sanitation sectors pushed up the demand for composites in Colombia. Based on the budget execution of the sales already concluded and the forecast of what can be executed until the end of 2022, it is estimated that consumption from these segments will grow between 15 and 20%.

Some local companies also benefited from the reduction in resin imports, due to higher prices, the exchange rate disparity between the dollar and the peso and logistical difficulties. On the other hand – and for the same reasons, in addition to political turmoil – other Colombian companies have seen their businesses dwindle and, in some cases, close their doors.

In short, the projection in Colombia is for a decline in the volume of processed composites of 3% in 2022.

ALMACO

Founded in 1982, 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.

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