

Machinery sector bounces back

The *ERJ* Tire & Rubber Machinery Survey 2024 identifies return to strong growth for equipment manufacturers worldwide

After the generally flat sales trends seen last year, respondents to the *ERJ* Tire & Rubber Machinery Survey 2024 registered an overall return to strong growth in markets worldwide.

Total sales among respondents replying to the survey both this year and last came in at \$3,712 million, representing a year-on-year increase of 18.6% – compared to just 1% and 20% in *ERJ*'s 2023 and 2022 surveys respectively.

The rebound recorded in this year's survey was despite continuing challenges linked to global geopolitical and trade tensions, such as the crises in the Middle East and Red Sea and Russia's continuing war on Ukraine.

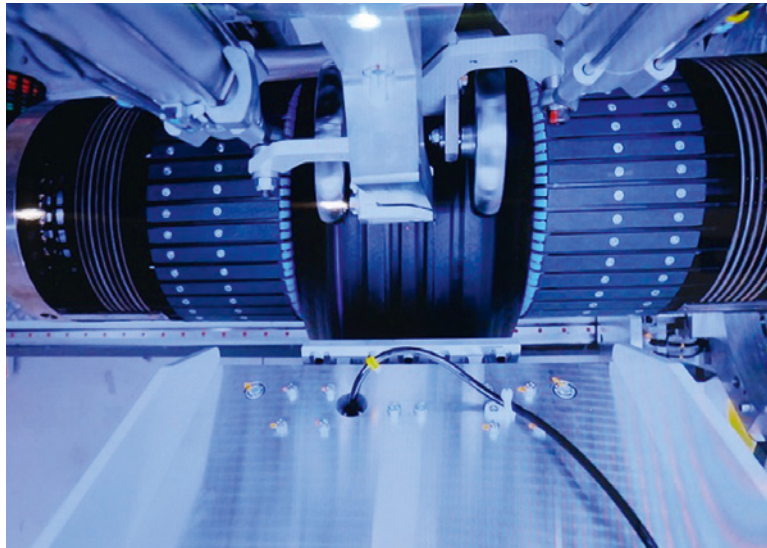
Analysis shows that the positive trends, in part, reflect developments in China: sales of Chinese-based rubber machinery manufacturers increased by 12% year-on-year to \$1,605 million.

Based on data provided by the Chinese Rubber Machinery Manufacturers Association, the figures compare to a decline of 3% reported last year, partly due to lingering effects of Covid restrictions in China.

But even more impressive was the 22% year-on-year increase in sales of companies based in Europe including Turkey, to \$1672 million, compared to growth of just 3% estimated in the 2023 survey.

In terms of global market-share, European-based tire & rubber machinery makers now represent around 45% of the total sales worldwide – similar to its estimated level in last year's survey.

Meanwhile in China, the other main manufacturing region, global share-of-sales was calculated at 43%

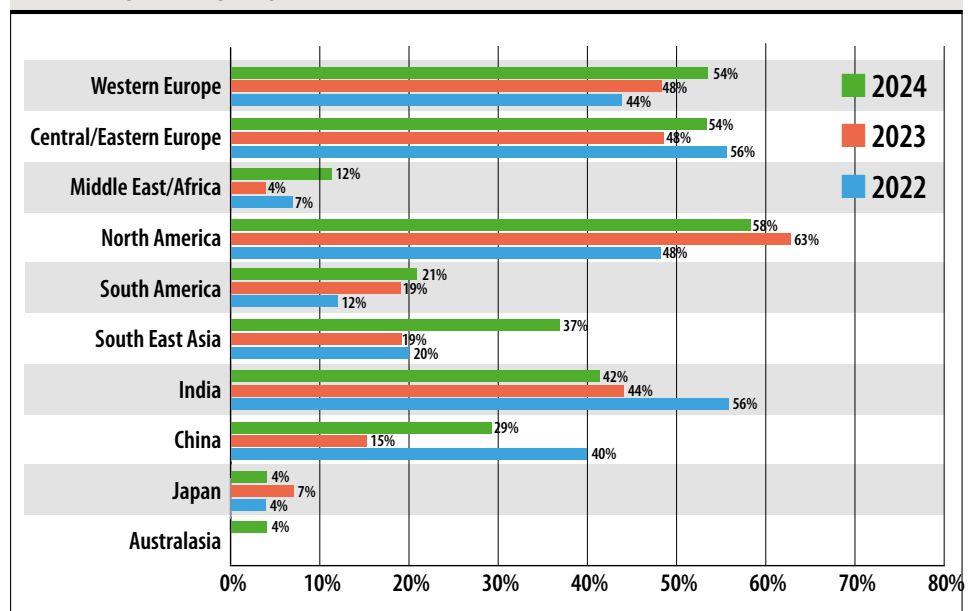


Sales and market share developments among European and Chinese manufacturers*

| | 2022 sales (\$m) | Share of global sales | 2023 sales (\$m) | Share of global sales |
|--------|------------------|-----------------------|------------------|-----------------------|
| Europe | 1,425 | 46% | 1,672 | 45% |
| China | 1,380 | 44% | 1,605 | 43% |
| Total | 3,131 | 100% | 3,712 | 100% |

*Based on data from companies responding to survey both this year and last

Fastest growing region



➔ CONTINUED ON PAGE 22

Leading rubber and tire machinery makers worldwide (sales in million US dollars)

| Supplier | 2023 sales USD million | Change vs 2022 | 2022 sales USD million | Change vs 2021 | 2021 sales EUR million |
|---|---------------------------|-------------------|---------------------------|-------------------|---------------------------|
| Mesnac Co. Ltd ^{1,2} | 606 | +29% | 470 | +1% | 464 |
| VMI Group BV | 487 | +16% | 421 | -11% | 473 |
| HF Group ³ | 452 | +23% | 367 | +17% | 314 |
| Troester GmbH & Co. KG | 281 | +89% | 149 | +19% | 125 |
| Safe-Run Machinery Co. Ltd ¹ | 252 | -2% | 258 | +5% | 246 |
| Dalian R & P Machinery Co. Ltd ¹ | 178 | +10% | 162 | -7% | 173 |
| LWB Steini GmbH & Co. KG | 123 | +5% | 117 | -6% | 124 |
| Guilin Rubber R & D Institute ¹ | 119 | +2% | 117 | -10% | 130 |
| Kobe Steel Group ⁴ | 118 | n/a | n/a | n/a | 200 |
| L&T Rubber Processing Machinery | 100 | -23% | 130 | +113% | 61 |
| Pelmar Engineering Ltd | 93 | +2% | 91 | +6% | 86 |
| Uzer Makina VE Kalip Sanayi | 83 | +46% | 57 | -3% | 59 |
| Tianjin Saixiang Technology Co. Ltd ¹ | 79 | +15% | 69 | -34% | 104 |
| Comerio Ercole | 73 | -1% | 74 | -5% | 77 |
| Yiyang R & P Machinery Group Co. Ltd ¹ | 63 | +9% | 58 | -11% | 66 |
| Guilin Rubber Machinery Ltd ¹ | 58 | 0% | 58 | +16% | 50 |
| Maplan GmbH | 58 | -8% | 63 | +19% | 53 |
| French Oil Mill Machinery Co. ⁶ | 55 | +22% | 45 | +15% | 39 |
| Herbert Tire Tooling GmbH & Co. KG | n/s | n/a | 53 | +12% | 47 |
| ARP Technologies (Suzhou) Co. Ltd ⁵ | 51 | +76% | 29 | n/a | n/a |
| Rodolfo Comerio | 51 | +4% | 49 | +39% | 36 |
| Dalian Second R & P Machinery Co. Ltd ¹ | 49 | +9% | 45 | -8% | 49 |
| Qingdao HLANG Special Equipment Technology Co. Ltd ¹ | 47 | +18% | 40 | -16% | 48 |
| Sino-Rubber Machinery Co. Ltd ¹ | 39 | -22% | 50 | -4% | 52 |
| New Universal Science and Technology Co. Ltd ¹ | 37 | 0% | 37 | n/a | n/a |
| Wuxi Suanxiang R & P Machinery ¹ | 34 | -3% | 35 | +101% | 17 |
| Marangoni Meccanica SpA | 27 | -16% | 32 | -11% | 36 |
| GZH Mech & Elec Equipment Co Ltd ¹ | 23 | +44% | 16 | n/a | n/a |
| Leonhard Breitenbach GmbH | 22 | 0% | 22 | -11% | 25 |
| Rocky-Ichimarú Co. Ltd ⁷ | 20 | +18% | 17 | +15% | 15 |
| Shaoxing Jingcheng R & P Machinery ¹ | 18 | -5% | 19 | -18% | 23 |
| Prodicon International Srl | 17 | n/a | n/s | n/a | n/s |
| Spoolex | 15 | 0% | 15 | 0% | 15 |

ERJ: For all Euro-to-USD conversions ERJ applied the average 2023 rate of \$1 = €0.9243 (2023), €0.951 (2022) / €0.845 (2021).

1: Figure supplied by CRIA in US dollars, based on conversion rate \$1 = RMB7.0939 (31 Dec 2023).

2: Mesnac sales figure is for machinery sales only.

3: (HF Group (Harburg-Freudenberger Maschinenbau GmbH) consists of HF Mixing Group, HF TireTech Group, Farrel Pomini.

4: Kobe Steel translates figures from Japanese yen (as per its annual report) into US dollars. Fiscal year runs 31 March.

5: Conversion rate: \$1 = RMB7.0939 (31 Dec 2023).

6: French Oil Mill Machinery figure based on estimated sales-range supplied (\$50-60m).

7: Rocky-Ichimarú Co. Ltd fiscal year to 31 March.

Strong earnings growth

Mesnac, the world's largest tire & rubber machinery supplier, reported a 65% increase in annual net profit to Yuan333 billion (€42 billion) in 2023, up from Yuan202 billion reported the year before.

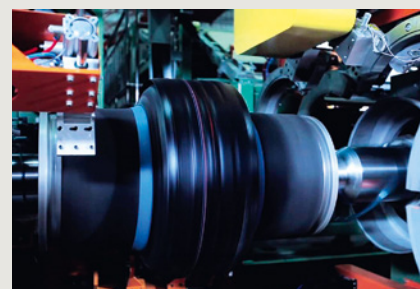
In its annual report filing for the Shenzhen Stock Exchange, the group said order volume was "running at a high level and delivery-guarantee capability has been further improved."

Mesnac linked the earnings growth to its investments in innovation,

including the introduction of "advanced design quality control in major R&D projects."

At the recent Tire Technology Expo in Hanover, Germany, for instance, Mesnac showcased its latest generation of integrated solutions for intensive mixing workshops.

Based on a 'One is enough' approach, the technology was said to employ "intelligent upgrades" that address variability in production due to human factors.



The highly automated system was also stated to improve overall production efficiency by 10% in part by "helping customers mix every batch of rubber."

➔ CONTINUED FROM PAGE 21

in the *ERJ* Tire & Rubber Machinery Survey 2024, compared to 44% last year.

Fastest growing regions

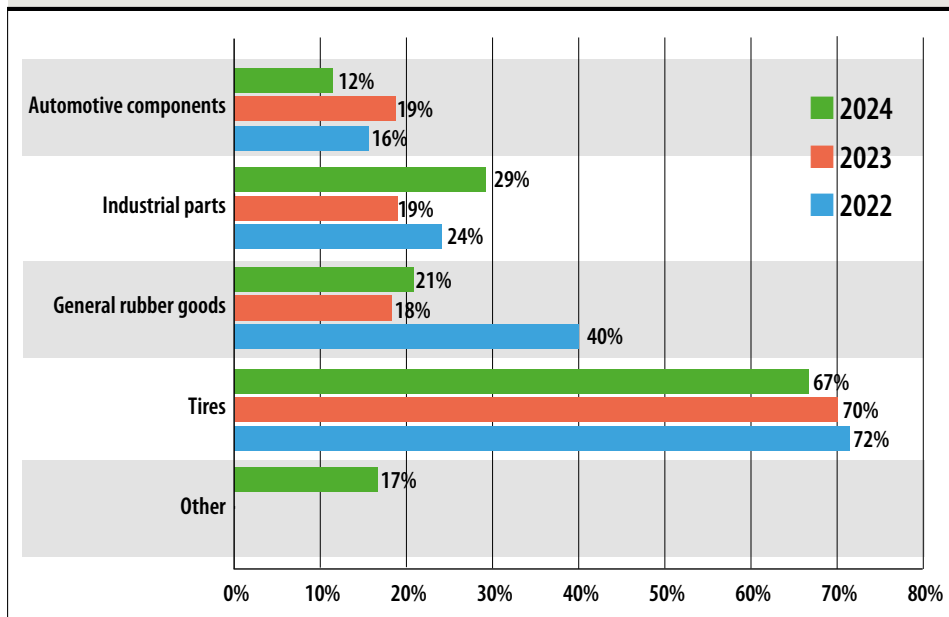
Each year respondents are asked to identify the fastest growing geographic market regions for their businesses. Among the standout figures in the *ERJ* Tire & Rubber Machinery Survey 2024 is the level of positive sentiment regarding markets in western Europe and solid indication of recovery in the Chinese market (See Table p21).

Reinforcing a theme identified in last year's poll, the European market seems remarkably resilient given continuing impacts of high energy costs, the Ukraine crisis and, more recently, tire plant closure announcements.

On the other hand, the region is attracting considerable investment, especially from overseas tire makers keen to increase access to EU markets.

Relocations of production due to EU sanctions on Russia have also contributed significantly to

Strongest market sectors



investment projects in Western Europe including Turkey and Central/Eastern Europe.

Furthermore, respondents to the *ERJ* survey reported a substantial pick-up in the number of automation and upgrade projects being carried out at European tire-man-

ufacturing facilities.

Nevertheless, tire & rubber machinery makers again rated North America highest among 'fastest growing' regions – despite this level dipping to 58% from 63% in last year's survey.

But, perhaps, the region to watch is China: following a substantial recovery in the country's rating to 29% – from a Covid-impacted, prior-year 15% – it will be interesting to see if this rebound effect gains momentum in 2024 and beyond.

Globally, survey respondents

➔ CONTINUED ON PAGE 24

Expand & upgrade

Among the companies reporting plans to expand and/or upgrade & modernise are: ARP Technologies, Carter Bros, Comerio Ercole, French Oil Mill Machinery, HF Group, Leonhard Breitenbach, LWB Steinl, Marangoni Meccanica, Prodicon, REP, Rocky-Ichimar, Rodolfo Comerio, Spoollex, Uzer Makina, VMI, Z-Laser.

Turning End-of-Life Tires into something new with recycled rubber powder

EVONIK
Leading Beyond Chemistry

genan

Biesterfeld
Competence in Solutions

Visit us at DKT:
Hall 9,
Booth 405

Our portfolio

CONTINUED FROM PAGE 23

noted trends towards more local manufacturing, reduced inventories, integrated tire manufacturing systems and more efficient production of small batches.

Other trends identified included increased production flexibility, due to ongoing increases in volumes and types of tires required by the market, as well as greater demand for high-quality tires that meet the latest performance and safety requirements.

End-product sectors

Asked to identify strongest end-product market sectors, ‘tire manufacturing’ again gained by far the highest score – though at 67% the sector’s rating was slightly down on levels recorded in recent years.

Despite recovery from post-pan-

Record order in-take

In a review of its 2023 business performance, Possehl Group, owner of the HF Group, noted a recovery in the global automotive market so that the number of OE passenger car tires produced was significantly higher than in the previous year – though the replacement market performed less well.

As a result of the market recovery, the group said its Tire Technology division returned to pre-pandemic levels of sales improvement of at least around 11%.

Both tire curing press and rubber mixer businesses re-



corded “strong growth, as incoming orders increased significantly year-on-year to almost €500 million across all product areas and were slightly higher than the sales generated.”

“With growth of around a quarter, the HF Mixing Group recorded an all-time high in order intake” in 2023, the parent group further reported.

demarc supply-chain issues, the automotive components industry seems still to be characterised by

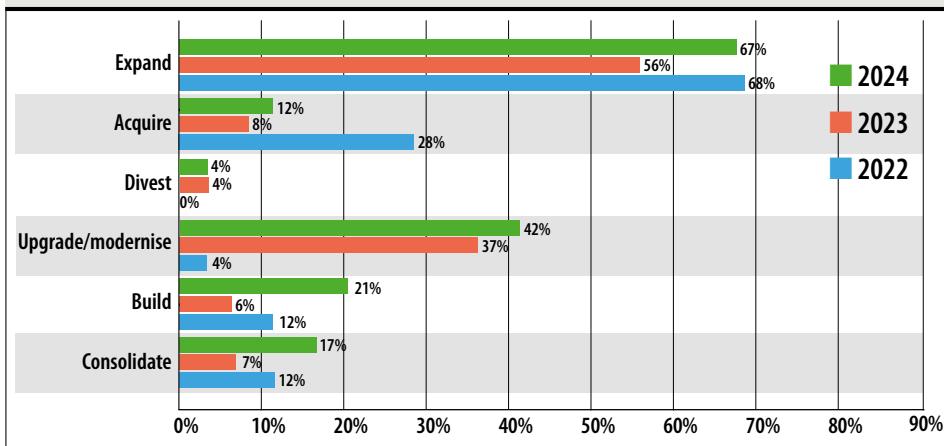
uncertainty. Having strengthened its ‘strongest market sector’ rating last year, the decline to 12% in the 2024 ERJ survey points to question marks over investment plans among the major vehicle parts suppliers.

More encouraging were the improved ratings from rubber machinery manufacturers for the industrial parts market as well as, to a lesser extent, the general rubber goods sector.

Future plans

In line with the above recovery trends in terms both of overall sales and performance of key markets, machinery companies are ramping up plans to enhance their manufacturing capabilities over the next 12 months.

Future plans



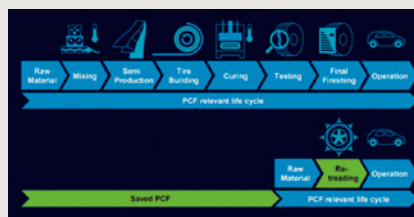
App helps tire makers to track carbon footprint

Among the main factors limiting the drive to sustainability in the tire manufacturing industry are complexity, changing legal regulations and lack of input about product carbon footprint (PCF) from suppliers, according to Peter Haan, leader of Siemens tire vertical.

To provide a PCF for your products to customers, said Haan: “You have to know the protocol for producing electricity or other energy, the cooling media, nitrogen, as well as all the other goods you buy, for example, carbon black and natural rubber.

“All of these materials have a history, they’re not coming just for free without protocols into your plant. All this has to be taken into account.”

According to the expert, Siemens



has responded to these challenges with the introduction of a management tool designed to enable dynamic PCF management across tire manufacturing operations.

Called SiGreen, the system is designed to enable the industry to manage its PCF more effectively via a communication & reporting system that allows for frequent and proactive updates of PCF data – including

quantifying improvements by suppliers.

The net result, explained Haan, is that tire makers gain access to dynamic PCF calculations that support effective target-setting and emissions-reduction measures with quantifiable results.

This, he said, provides “a specific, dynamic and trustworthy PCF as a basis for data-driven decisions that accelerate decarbonisation in their own operations as well as their supply chains.”

Going forward, Siemens aims to continuously enhance SiGreen as a solution to “address further ESG criteria, supporting product passports and a circular economy in the future,” concluded Haan.

This is evidenced by significant increases in the number of respondents ticking the 'expand' and 'upgrade/modernise' boxes in the ERJ Tire & Rubber Machinery Survey 2024 (see p23).

Meanwhile, increased plans to 'acquire', 'build' and 'consolidate' are further indications of efforts among machinery suppliers to adapt their manufacturing set-ups to changing requirements of regional and global markets.

Survey feedback

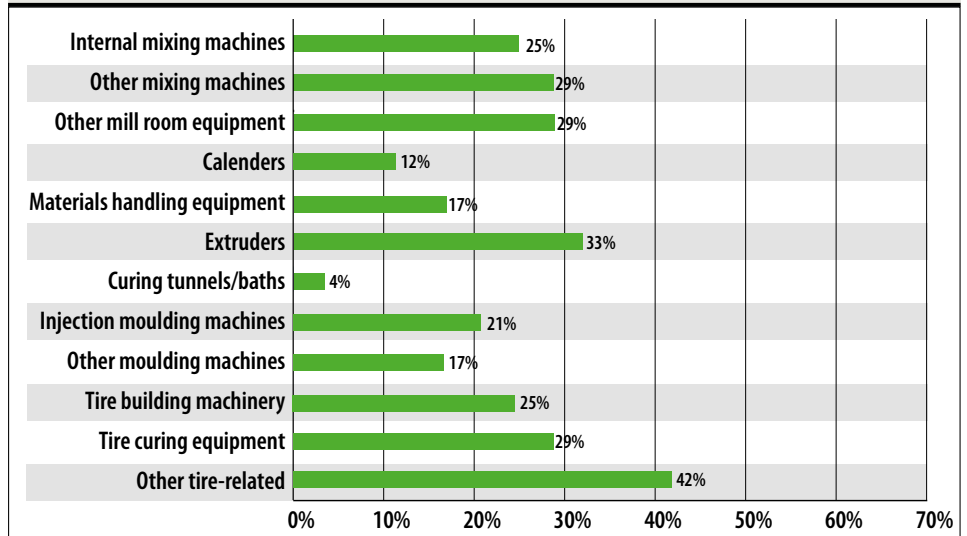
Interesting feedback on this year's survey forms included comments from Cimcorp that "automation investments for brownfield production plants especially in Europe and North America as well as automation investments for greenfield production plants in Europe, Asia, and North America seem to be growing."

In response to the latest development in the tire industry, Cimcorp said it is focused on advancing 'software solutions', such as its 'tire production dashboard' which enables increased utilisation rates in curing processes.

Meanwhile, Pelmar Engineering reported that the company is "interested in development of specialised individual and complete lines, dedicated to improvement of production systems and reduction of waste & scrap [as well as] in joint ventures."

Also commenting on their plans for expansion, Japanese supplier Rocky-Ichimarū stated that the company "is planning to expand into India," while France-based Spolex said it will extend its offerings "for complete cells and continue investment in R&D for new technologies to increase productivity."

Machinery supplied by respondents to 2024 survey



Smart manufacturing drive

For 2023, TKH Group – parent of Dutch-based tire & rubber machinery and systems maker VMI – reported a 17% year-on-year increase in sales, to €574 million, at its 'Smart manufacturing systems' unit.

Tire building systems represent around 75% of turnover within the 'Smart manufacturing systems' segment, which claims a 70%+ share of the global market.

Group-wide, TKH linked an increase in the percentage of its sales in Asia to "a larger share of tire building machines delivered to [the region]."

The order book at the 'smart manufacturing' unit grew by 10% year-on-year to come in at €631 million, "driven by tire building systems, which benefitted from the effects of reshoring, and capex programmes of tire manufacturers."

The business unit also reported "an acceleration of deliveries of a large inventory of incomplete tire building machines in the last few months of 2023, as



supply constraints eased."

Order intake, for both passenger car and truck tire systems, was driven by investments in "the production of more sustainable tires, the rise of electric vehicles and the need for more automation."

The supply effort was helped by the addition of new capacity for tire building systems in Leszno, Poland, which became operational in the second quarter of last year. A further expansion of these production facilities was set to come on-stream in the first half of 2024.



Eco-Friendly Latex Rubber Emulsions

Protective & Safety Workwear

- Industrial Latex Gloves
- Fabric Gloves with Latex Coating
- Moisture Resistant Clothing

Medical PPE

- Medical Latex Gloves
- Gowns, Aprons & Bed Linens
- Incontinence Pads

Paints, Coatings & Adhesives

- Food Packaging Paper Coating
- Water-based Latex Paint
- Glue Manufacturing

-  Environmentally friendly
-  Hypoallergenic
-  Coagulant Dip
-  Low Air Permeability
-  Abrasion resistant
-  Weather resistant
-  Versatility
-  Chemical resistant

ChemPacifc Corporation | 6200 Seaforth Street, Baltimore, MD 21224
Tel: (410) 633-5771 | **Fax:** 410-633-5808 | **sales@chempacifc.com**