PowerTALK



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About Us

Power Systems Research (PSR) is a world leader in providing power equipment information, whether it's pure data, analysis, forecasting or specific business intelligence. This product information ranges from IC engines to battery-electric and hybrid powertrain technologies. PSR has been providing world class business and market intelligence to industry leaders for more than 40 years. How can we help you? For details, call **+1 651.905.8400** or email **info@powersys.com**. **www.powersys.com**

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中国語や日本語で読みたいという読者様のニーズに応えるために、アジアから中国語と日本語の記事を提供しています。中国語をご希望の方は**こちら**を、日本語をご希望の方は**こちら**をクリックしてください。





Dealing With Coronavirus

At Power Systems Research our business is based on being informed: Globally, and in several important industry segments.

Even as the coronavirus affects markets and industries and companies worldwide, we're continuing to work effectively for our clients. We're adjusting our operations hourly to meet the changing needs caused by coronavirus. Our IT staff has adapted PSR systems so our analysts around the world can work at home and communicate easily and effectively with each other and with the home office.

Key employees are working on-site at our headquarters, and we've established tight and ongoing cleaning procedures in our building to ensure their safety. We're continuing with our regular data updates and production schedules, so our clients will continue to receive the high level of consistent service that they've come to expect from us since 1976.

The coronavirus has an incredibly dangerous and disruptive impact on people and business, but we're adapting and adjusting to meet the challenge.

We appreciate the relationships we have developed with you over the years. If we can assist you as you navigate these challenging times, please call. We're here and ready to help. **PSR**

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CONEXPO-CON/AGG REPORT

Electrification Was the Name of the Game in Las Vegas

EDITOR'S NOTE: CONEXPO-CON/AGG is North America's largest construction trade show representing the construction and concrete industries. At this year's show, Power Systems Research had nearly a dozen representatives visiting many of the 2,300 exhibitor areas discovering new products and identifying important industry trends.

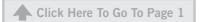
See Daily Product Reports and Photos

LAS VEGAS—This year's CONEXPO featured an unexpected and unwanted visitor, the coronavirus, which is traveling around the world. Even though the coronavirus caused the show to close one day early, attendance still topped 130,000 for the week, up from 128,000 in 2017.

U.S. buyer attendance increased 8% from the 2017 show, according to show management, and total buyer attendance improved by almost 5%.

Visitors saw the technological change revolutionizing these industries—especially the electrification of machines from sweepers to forklifts—as they walked more than 2.7 million square feet of exhibits presented by some 2300 exhibitors from leading U.S. and global manufacturers. **PSR**







Europe Report

A New Era in EU Industrial Strategy

By Emiliano Marzoli, Senior Business Development Manager-Europe



Read The Article

The European Commission has released a document showing how they are going to support the European Industry in the challenging transformation required in the coming years. This is a summary of the main initiatives included in the new strategy:

Emiliano Marzoli

- Support all types of companies, from start-ups to large multinationals.
- Develop dedicated strategy for SMEs and help them with digital and green transformation.
 - » Support initial public stock offerings (IPO)
 - » Provide more funding
 - » Encourage empowerment of women
 - » Develop Best Practices and a Start-up standards across Europe
- Focus on strengthening the single EU market
 - » Different barriers still exist across the EU, mainly due to national regulations and inadequate application of the single market.
 - » Work on stronger enforcement of the single market rules.

• Three Key Priorities:

» Develop Global Competitiveness

- Create Intellectual Property action plan to support technological development and defend EU companies from Intellectual property theft.
- Defend unfair global trade mechanisms and subsidies that would negatively affect the European market.

» Make Europe Climate Neutral by 2050

- Develop comprehensive measures to modernize and decarbonize energyintensive industries, support sustainable and smart mobility industries, promote energy efficiency, strengthen current carbon leakage tools and secure a sufficient and constant supply of low-carbon energy at competitive prices.
- Secure supply of critical raw materials.
- Create a Clean Hydrogen Alliance to accelerate the decarbonization of industry and maintain industrial leadership, followed by alliances on lowcarbon industries and on industrial clouds and platforms and raw materials.
- Put together further legislation and guidance on green public procurement.

» Shape Europe's Digital Future

- Develop strategic digital infrastructures and key enabling technologies.
- Emphasize a renewed focus on innovation, investment and skills.





Europe ReportContinued from page 3

These Three pillars can give European companies the opportunity to grow and strengthen their position in the global market. The green and digital transformations are critical to develop new skills and capabilities to retain Europe as an innovation leader.

The new digital technologies can increase significantly the productiveness of organizations and ultimately provide competitive advantages. The effort that the European commission will put in place to support and protect these advantages will be critical in order to extend Europe companies technological leadership.

The new Clean Hydrogen Alliance can provide many benefits to European Industrial segments, such as large-scale renewable energy, a more secure source of energy to EU companies and support for future R&D of this technology on a large-scale application, embracing machinery manufacturers to service providers. **PSR**

Mercedes-Benz Focuses on Autonomous Driving Trucks

By Dalibor Sablic, Senior Business Development Manager-Europe

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Dalibor Sablic

Read The Article

Daimler CEO Ola Kallenius has realigned the focus of Mercedes-Benz and has changed its focus on autonomous driving. Instead of self-driving cars, trucks are now at the top of its priority list.

The German carmaker plans to concentrate on autonomous trucks, explained Daimler boss Ola Kallenius in a conversation with journalists at the canceled Geneva Motor Show. The group

believes that self-driving trucks are initially the more attractive area, says the Daimler boss, according to the news platform news.com.au.

It is primarily about journeys between different logistics centers. Mercedes-Benz / Daimler: Level 4 truck in the test Daimler's truck division started testing on public roads with self-driving trucks (Level 4 technology) in the USA last autumn, and the tests were expanded in February. This was preceded by the takeover of the US software company Torc Robotics, which specializes in autonomous driving, in March 2019. In December, the final starting signal was given for a pilot project by Mercedes-Benz and Bosch, in which a whole fleet of automated vehicles drove through the California city of San José.

Accordingly, Kallenius also made it clear that the group would continue to invest in self-driving cars. But you want to distribute your resources so that significant sales can be generated as early as possible. This may not be the case with cars.

While it is still not entirely clear with autonomous cars how the technology will be accepted by buyers and how the regulators will react, autonomous driving of trucks between clearly defined points on motorways is likely to face fewer obstacles.

Transport companies would only benefit from the fact that truck drivers would





Europe ReportContinued from page 4

In 2019, annual production of Utility Vehicles in North America decreased 2.5%. This market is expected to gain 2.5% in 2020 over 2019, although this may change because of coronavirus.

have to take fewer breaks. Just over a year ago, Daimler announced that it wanted to put €500 million euros in Level 4 trucks.

In any case, the carmaker also wants to hold onto the investments in the further development of the technology behind it - as well as the cooperation with BMW in the field of self-driving cars. **PSR**

DataPoint: *NA Utility Vehicles* 436,700

By Carol Turner, Senior Analyst, Global Operations

This is the estimate by Power Systems Research of the number of Utility Vehicles to be produced in North America (Canada, Mexico and the United States) in 2020.

This information comes from industry interviews and from two proprietary databases maintained by Power Systems Research: **EnginLink™**, which provides information on engines, and **OE Link™**, a database of equipment manufacturers.

Market Share: With combined plant totals of 32%, Polaris leads in production of utility vehicles in North America. Polaris has plants in Mexico and the US. In second position is Honda with 13%, followed by Deere with 12%.

Exports: Canada exports up to 90% of its production, Mexico exports up to 85% in North America markets, and the US sends up to 55% of its production worldwide.

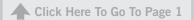
Trends: In 2019, annual production of Utility Vehicles in North America decreased 2.5%. This market is expected to gain 2.5% in 2020 over 2019, although this may change because of coronavirus. The gain is attributed to stabilization of the overall economy, demand for products in the golf industry, federal government incentives and the desire for new equipment/greener technology, especially within the sport and utility sectors.

Utility Task Vehicle (UTV) models, also referred to as Side by Side (SxS) units, are particularly popular now and are edging out ATVs for preference. Most UTVs can accommodate up to 6 passengers and are primarily designed for off-road recreation and work applications. Production is expected to gain up to 5% over the next 3-5 years. **PSR**

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Brazil/South America Report

By Fabio Ferraresi, PSR Director, Business Development, South America



Fabio Ferraresi

Coronavirus Jeopardizes Brazil Agricultural Machines Production

Lack of components coming from China may be a problem because of work interruptions caused by the coronavirus. According to the Brazilian Machinery Builders' Association (ABIMAQ), the risk of supply stoppages is high. The Chinese content of an Agricultural Machine produced in Brazil is estimated to be 10% to 15%, with higher concentration on electronics components.

Source: M&T / Globo Rural Read The Article

PSR Analysis: This is an opportunity for local and international players to start supplying these companies as an alternative source. The time window is short for development of alternative sources, but global companies may start risk mitigation plans. Understanding the opportunities, volumes and component content will be key at this moment.

Production of Cars in Ecuador Drops 54% in One Year

The combination of market decline by 31% and the increase of vehicle imports are the main reasons for the drastic reduction in production. From 2010 to 2015, the local production has been above the imports, with significant exports to neighbor countries as Colombia and Peru. From 2016 – 2018, imports grew from 31,000 to 103,000 units, while the production grew from 29,000 to 42,000 between 2016 and 2017, after a significant market growth, but reduced from 42,000 to 18,000 in 2019 with the competition from imports.

Source: PSR / AEADE Source: M&T Read The Article

PSR Analysis: Currency policy changes and changes in automotive industry regulations are the main reasons for the shift in the automotive industry of Ecuador. These changes affect not only Ecuador, but also the ability to reach neighbor countries with its products, opening space for other players, like Brazilian and Chinese. **PSR**

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China Report

By Qin Fen, 秦奋 PSR Business Development Manager-China. 业务拓展经理

Beijing Municipal Passes Emission Off-Road Regulation

The Beijing Municipal government officially published an emission regulation paper March 9, 2020. The regulation is effective May 1, 2020.





China Report Continued from page 6





Qin Fen

Source: Beijing Municipal Government Read The Article

PSR Analysis: Coronavirus has changed many things in China, but it is not going to delay the implementation or reduce the determination of the Beijing local government to curb air pollution.

Starting in May, we will see more stringent emission regulations and more law enforcement of off-road machines. The regulation gives local government more authority and convenient access

to emission device details. For the first time, this regulation provides regional coordination among Beijing and its neighboring provinces like Hebei and Tianjin. They are not the only region to do this; more and more cities in Yangtze and Zhujiang Delta region are cooperating on legislation and law enforcement in efforts to curb air pollution. **PSR**

中国报道

秦奋 - 业务拓展经理

北京市机动车排放污染防治条例公布

2020年3月9日 — 北京市人民政府正式公布了《北京市机动车和非道路移动机械排放污染防治条例》,该条例已自2020年5月1日起正式施行。

新闻来源:北京市人民政府 阅读原文链接

PSR分析: 冠状病毒并没有延后北京市政府实施遏制空气污染的决心。

从今年5月开始,我们会看到对非道路机械越来越严格的排放法规和依法治理。

这一条例赋予了地方政府更多执行的权力,也更容易看到排放装置的产品细节。这一法规有史以来第一次经过京津冀地区间协调立法,共同治理。并且布置京津冀,长三角和珠三角各个地区和城市也正在越来越多地协调立法和执法,共同遏制空气污染。**PSR**

Far East: Japan Report

By Akihiro Komuro, Research Analyst, Far East and Southeast Asia

Komatsu Launches SMARTCONSTRUCTION Retrofit Kit

Komatsu has launched the SMARTCONSTRUCTION Retrofit kit, the add-on kit to offer ICT capabilities, such as 3D machine guidance and payload measurement, to conventional construction equipment in Japan. It will be available in late April through LANDLOG Ltd.



Click Here To Go To Page 1

Far East Report Continued from page 7

One of the breakthroughs of Komatsu's approach is that hydraulic excavators can be installed, regardless of maker or model.

Conventional construction equipment with no ICT capabilities account for over 98% of all construction equipment working on construction sites in Japan. When the SMARTCONSTRUCTION Retrofit kit is added to conventional equipment, it will enable the equipment to use ICT functions, such as 3D machine guidance and payload measurement, about on par with ICT-intensive equipment.



Akihiro Komuro

To accelerate the pace of achieving digital transformation of construction worksite operations, the SMARTCONSTRUCTION Retrofit kit can be added to other makes if they are hydraulic excavators. To make ICT functions more user-friendly, Komatsu offers the GNSS correction service with information distribution, which is needed for 3D construction work, as well as the "SMARTCONSTRUCTION Pilot" application for the SMARTCONSTRUCTION Retrofit kit, which transmits 3D design data and manages construction records. This application allows

for the use of commercially available tablets as monitors.

Source: Komatsu Press Release

PSR Analysis: The introduction of ICT functionality in upcoming models is being standardized, but as mentioned in the release, 98% of existing models do not have ICT functionality. This retrofit kit enables ICT construction even with these older models.

One of the breakthroughs of Komatsu's approach is that hydraulic excavators can be installed, regardless of maker or model. Of course, many other manufacturers, such as Hitachi Construction Machinery, Sumitomo Construction Machinery and Kobelco, are also accelerating their ICT efforts.

Komatsu's strategy is to stay ahead of the competition and make its services the industry standard. The labor shortage will worsen in the future, and demand for ICT at construction sites will continue to grow. By setting the GNSS positioning satellite system's own base station, the error between the drawing and the site can be reduced to a radius of 2 cm. This is a great achievement and is expected quickly to expand the market. **PSR**

極東 > 日本レポート:

小室明大 - 極東及び東南アジアリサーチアナリスト

コマツがスマートコンストラクション・レトロフィットキットの導入を開始

コマツは、建設現場で稼働している既存の従来型建機に、3D-マシンガイダンス機能やペイロード機能などのICT機能を提供する後付けキット「スマートコンストラクション・レトロフィットキット」を2020年4月下旬より株式会社ランドログを通して、日本国内に導入開始します。現在、日本の建設現場で稼働する建機の98%以上は、ICT機能を有さない従来型建機であり、「スマートコン

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Far East Report Continued from page 8



ストラクション・レトロフィットキット」は、既存の従来型建機に取り付けることで、3D-マシンガイダンスやペイロード機能などICT建機と同程度のICT機能を利用できるようにするものです。

建設現場におけるデジタルトランスフォーメーションの実現を加速させるために、「スマートコンストラクション・レトロフィットキット」は、コマツ製の建機だけでなく、油圧ショベルであれば機種を問わず後付け可能です。またお客さまがICT機能をより利用しやすいように、3D施工時に必要な「GNSS補正情報配信サービス」や3D設計データの送信や施工履歴を管理するスマートコンストラクション・レトロフィットキット用アプリSMARTCONSTRUCTION Pilotを併せて開発・提供します。同アプリは市販のタブレットをモニターとして利用いただけるようにするなどし、「スマートコンストラクション・レトロフィットキット」の利便性を高めるとともに低価格でのご提供を実現致しました。

出典: コマツ ニュースリリース

PSR 分析: これから販売されるモデルへのICT機能の搭載は標準化されつつあるが、リリース内でも触れられているように、すでに稼働中のモデルの98%はICT機能を有していない。今回発表されたレトロフィット機能は、そうした旧型モデルでもICT施工を可能にする。コマツのこの取り組みが画期的なのは、油圧ショベルであればメーカーや機種を問わずに取り付け可能にしたことだ。もちろん、日立建機、住友建機、コベルコなど、他の多くのメーカーでもICTへの取り組みは加速している。コマツの戦略はそうした競争を常に先んじて、自社のサービスを業界の基準にするスタンスだ。今後人手不足はさらに深刻化するため、建設現場におけるICT化の需要は伸びる一方だ。測位衛星システムGNSSの独自基地局をセットすることで図面と現場の誤差を半径2cmに抑えられるこのシステムは、他社と比較しても明らかに先行しており、今後の拡充は間違いない。PSR

Far East: South Korea Report

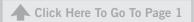
Three South Korean EV Battery Manufacturers Grab Share

Based on the capacity of EV-equipped batteries sold in January 2020, the three largest Korean battery companies (LG Chem, Samsung SDI and SK Innovation) have a combined share of 30.8%, exceeding 30% for the first time. In the ranking of total power consumption of EV batteries, China's CATL is in the top place for the third consecutive year, LG Chem is in third place, Samsung SDI is in fifth place, and SK Innovation is in tenth place. For the first time, SK Innovation has joined the Top 10.

However, first place CATL and second place Panasonic recorded growth rates that far exceeded the market average. Currently, CATL and Panasonic account for more than half of the global EV battery market, and Korean manufacturers must have competitive products and market strategies to overcome the momentum of these two companies.

Source: KBSWORLD





Far East Report Continued from page 9

PSR Analysis: LG Chem has GM, Samsung SDI has BMW, and SK Innovation has Hyundai as major customers. The growth of EVs of these brands is driving the growth of three Korean EV battery manufacturers. However, outside of South Korea, CATL is supplying Chinese Car brands and Panasonic is supplying TESLA, and these two companies are market leaders. Many battery manufacturers have already built battery production plants for EVs around the world, and competition will intensify in near the future. **PSR**

極東 > 韓国レポート:

小室明大 - 極東及び東南アジアリサーチアナリスト

韓国EV電池3社の躍進

2020年1月に販売されたEV搭載バッテリー容量基準で、韓国バッテリー大手3社(LG化学、サムスンSDI、SKイノベーション)のシェアは合わせて30.8%となり、初めて30%を超えた。EV用バッテリーの総電力量ランキングでは、中国のCATLが3年連続で1位を占めているなか、LG化学が3位、サムスンSDIが5位、SKイノベーションは10位を記録した。SKイノベーションは初めてトップ10の仲間入りを果たした。ただ、1位のCATLと2位のパナソニックは、市場平均を大きく上回る増加率を記録している。現状はCATLとパナソニックが、グローバルEVバッテリー市場の半分以上を占めており、韓国メーカーにとっては今後この2社の勢いを克服するための競争力や市場戦略が求められている。

出典: KBSWORLD

PSR 分析: LG化学はGM、サムスンSDIはBMW、SKイノベーションは現代をそれ ぞれ大口顧客として持っている。これらのブランドのEVが伸長していることに よって韓国のEVバッテリー3社が躍進している。だが世界ではCATLが中国ブランドへ、PanasonicがTESLAへそれぞれ供給しており、この2社を韓国3社は 追従する様相だ。すでに多くのバッテリーメーカーがEV向けバッテリーの生産工場を世界中で建設しており、今後ますます競争は激化するだろう。 PSR

Southeast Asia: Thailand Report

By Akihiro Komuro, Research Analyst, Far East and Southeast Asia

Subcenter Development in Bangkok

The railway network is rapidly expanding in Bangkok, Thailand, the core city of Southeast Asia. The aim is to disperse urban functions that have become severely congested due to urban development and the rapid increase in the number of cars.

New routes will be opened until 2023, including the connection of two major airports in Thailand, and the total distance will be double the current distance. The total project cost is 1 trillion yen, and development along the railway is active.

Originally, in Bangkok, the Chao Phraya River flowed north and south through the

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Southeast Asia Report Continued from page 10

Traffic jams and air pollution in urban Southeast Asia are not limited to Bangkok. Many cities, such as Jakarta, Kuala Lumpur and Ho Chi Minh City, are facing this problem.

city, making it difficult to move east and west. However, the birth of the circular line resolved that problem, and now it is possible to travel with a single train between the business district extending from central Bangkok to the east and the residential area west of the Chao Phraya River.

Source: Nikkei

PSR Analysis: Traffic jams and air pollution in urban Southeast Asia are not limited to Bangkok. Many cities, such as Jakarta, Kuala Lumpur and Ho Chi Minh City, are facing this problem. Several measures have been devised, including plans to relocate the city itself, but many have been stalled due to economic and political problems.

While Bangkok's progress has been successful, it's still half completed, and many problems must be solved to complete the project. Today's economy is starting to decline due to the coronavirus problem. But the policy of developing cities through roads and railroads and dispersing excessive concentration is a move in the right direction. Southeast Asia may be the best place to see the diversification of transportation, with the rise of car sharing, ride sharing and EV bikes. **PSR**

東南アジア > タイレポート:

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バンコク、動き始めた「副都心」開発 一極集中解消へ

東南アジアの中核都市であるタイ・バンコクで鉄道網が急拡大している。無秩序ともいわれる都市開発や車の急増で交通渋滞が深刻になり、都市機能を分散するのが狙い。国内2大空港が結ばれるなど2023年まで新路線の開通が相次ぎ、総距離は現在の2倍となる。総事業費は1兆円にのぼり沿線開発も活発だ。高層住宅やオフィスビルからなる「副都心」が生まれ、従来のバンコクの街並みが変わりつつある。もともと、バンコクは街を南北にチャオプラヤ川が流れ、東西の行き来が面倒だった。だが環状線の誕生でそれが解消し、バンコク中心部から東部に広がるビジネス街と、チャオプラヤ川の西側の住宅街を電車1本で移動できるようになった。東南アジアの大国であるタイは、日本メーカーを中心に自動車生産大国としても知られ、経済成長に合わせ、車の所有率は飛躍的に上がった。

ただ、タイでは長く都市計画をなおざりにした開発が進み、都市機能は中心部に集中したままで、経済成長に見合うだけの道路のインフラ建設が大きく遅れた。例えば、バンコクは都市に占める道路面積の比率は7%と、東京の半分以下でしかない。そのため、渋滞がひどい世界の都市ランキングでも17年にはワースト2位(オランダの地図大手トムトム調べ、19年は同11位に改善)にまで落ち込んでいた。今でも大気汚染が悪化する日は、公立小中学校を臨時休校する措置も取られているのが現状。政府は「副都心化」を切り札に、対策を急いできた。ただ、まだ道半ば。先行きには不安材料も出てきた。タイは昨年後半から米中貿易戦争の影響を特に受け経済成長率が2.4%にとどまった。





Southeast Asia Report Continued from page 11



これは軍事クーデターが起きた14年以来の低水準だ。さらに直近も、新型コロナウイルスの感染拡大で主力の観光業や製造業が大きく打撃を受け、今年は同1%台に低迷する予測もある。今後、開発中のプロジェクトが遅れ新規投資が抑制される可能性も否定はできない。

出典: 日経

PSR 分析: 東南アジアの都市部の交通渋滞と大気汚染は、バンコクに限ったことではない。ジャカルタ、クアラルンプール、ホーチミンなどの多くの都市がこの問題に直面している。都市自体の移転計画を含むいくつかの手段が過去に検討されたがそれらの多くは経済的・政治的問題のためにとん挫していた。バンコクの進展はここまでは成功しているが、まだ道半ばだ。プロジェクトを完了するには多くの問題を解決する必要がある。足元の経済はコロナウイルスの問題により衰退し始めている。しかし、道路や鉄道を通じて都市を発展させ、過剰な集中を分散させるという政策は、正しい方向への動きである。東南アジアは、カーシェアリング、ライドシェアリング、EVバイクの台頭によって、交通の多様化を見るのに最適な場所かもしれない。PSR

India Report

By Ritvik Kulkarni, Research Analyst - India.

Coronavirus Reduces India Auto Components



Ritvik Kulkarni

China is one of the leading suppliers of auto components to India, and this supply chain was significantly interrupted in Q1 2020 by the caronavirus. In 2018-19, components worth an estimated US\$4.5 billion (out of a total of approximately \$17 billion) were exported from China to India. Most of this trade is in electronic components, EGR modules, fuel injection pumps, turbochargers, meter sets, LEDs, magnets, airbag components, and steering system components.

Since the discovery of the Coronavirus in December 2019, this supply chain has been affected. The covid-19 pandemic has started taking a toll on components supply and automotive production in India. The situation is further amplified, as China has terminated all sea routes to other parts of the world.

On the positive side, Maruti, Hyundai, and Toyota say production schedules are unaffected so far by the coronavirus outbreak in China. **Read The Article**

PSR Analysis: The severity of the impact of the outbreak is different for different segments of the auto industry. Passenger cars and SUVs are expected to suffer a relatively mild impact because of greater localization of the market leading OEMs, Maruti and Hyundai.





India Report Continued from page 12

As the coronavirus pandemic continues, it will continue to disrupt the supply chain and will adversely impact customer sales.

However, the key players in the two-wheel segment have taken a beating. The country's two major players, Hero MotoCorp and TVS Motors, reduced their production by about 10% in February. The companies say that even though their direct dependency on China is limited, their production is hampered because of a dip in the production of a few Tier II suppliers. To tackle this problem, TVS Motors is scouting suppliers in other regions and may as well localize within India.

Tata Motors, M&M, MG Motor Hurt by China Shutdown

The impact of the coronavirus outbreak is higher on the commercial vehicle segment than on the auto side. The key players in this segment – Tata Motors and Mahindra and Mahindra are seeing unexpected challenges in their parts supply from China. This problem is expected to hinder their BS6 ramp-up. But the companies claim each passing week is better than the previous one, and if the improvement continues at the current pace, by early April, supplies from China will resume. **Read The Article**

PSR Analysis: As the coronavirus pandemic increases, it will continue to disrupt the supply chain and will adversely impact customer sales. The Indian auto industry had already maintained an inventory at the beginning of the year in anticipation of the Chinese New Year holiday, so, the virus outbreak is not expected to cause much disruption in the fourth quarter of fiscal 2020.

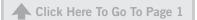
Still, with the current scenario, the production rate will further slow down. This slump in supply chains will hinder the production of electric vehicles in India, which is mostly dependent on parts imported from China. Auto manufacturers are developing alternative suppliers to meet supply chain demands, but it would take some time to reach a stable production scale when considering the average product development cycle. We anticipate that 1H 2020 will be a tough period for the automobile industry.

Nevertheless, many OEMs and tier 1 suppliers are forced to source more parts locally. This risk-mitigation is expected to boost the local auto components industry and to avoid the adverse impact of overdependence on other countries. **PSR**

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Russia Report

By Maxim Sakov, Market Consultant, Russia

Haval To Build Engine Plant in Russia



Maxim Sakov

Haval, the Chinese manufacturer, said it plans to build its own engine plant in the Tula region of Russia. Work is scheduled start this month (March 2020). The planned investment in the project is US\$ 270 million. This information comes from press-service of Haval Motor Rus.

It's expected that the new plant will produce 80,000 engines annually, increasing the localization level of SUVs by several thousand units annually. Total personnel number in automotive

plant exceeds 1000 people. Read The Article

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production capacity is 80 Haval SUVs. The plant will be located on a 10,000 sq.m. site next to the Haval automotive plant. It will provide more than 300 jobs.

PSR Analysis: The first Russian Haval plant opened in May of 2019. Current

Claas is Shifts Production of Tucano 320 To Russia.

In April 2020, the Russian plant Claas in Krasnodar will start producing the Tucano 320 grain combine. During the first two years, this model will be produced simultaneously in Germany and in Russia. Beginning in 2022, the plant in Krasnodar will became the sole maker for this model. The move opens opportunities to increase production and export volumes for the Russian plant.

The Krasnodar plant will make this model for the domestic market and for export around the world. Currently, this model is sold in Romania, Germany, Poland and Serbia. Production volume is estimated at 250 units per year. **Read The Article**

PSR Analysis: This is a good example of cost-efficient production of good quality machines in Russia. Today, the Russian Claas plant produces components and exports them to the EU. The reduced cost of assembly when it is shifted to Russia will make the OEM more competitive.

Mass Sales of Aurus Bikes To Start in 2022

Serial production of Aurus bikes will start in 2022-2023. According to recent announcements, the bike will be electric powered, and its specifications should be competitive with similar foreign products. **Read The Article**

PSR Analysis: The Russian NAMI institute is developing a full range of luxury vehicles – sedan, SUV, minivan and bike under the Aurus brand. The sedan and cabrio already are in production. The vehicles will be used primarily to carry high level government officials and their security personnel. But the vehicles will be available for sale to the public as well.





Russia Report Continued from page 14

This internal transportation is designed for enterprises with large territories. The new 10-ton Shuttle will circulate between workshops and warehouses.

KAMAZ Shows Cabinless Electric Truck "Shuttle"

This internal transportation is designed for enterprises with large territories. The new 10-ton Shuttle will circulate between workshops and warehouses. Without front and rear, this autonomous machine vision can drive both directions and doesn't need U-turns.

According to OEM announcement, the autonomous 10-ton container works on electric power and can be loaded from 5 sides (including loading from up). This approach ensures ability to work with any logistics hubs.

The battery capacity is not disclosed yet, because development is not completed. Speed limit is claimed as 40 km/h. The Shuttle moves without the driver on the pre-set route. Machine vision includes full range reaction on the external situation. When blocked, the vehicle stops or moves around obstacles.

The chassis is equipped with two axles, and all wheels are able to turn, which increases maneuverability. The exterior is minimalistic. Without the cabin, it has no front and rear. Headlight and stop signals are located on both ends of the truck. The size of new truck is 8 x 2.55 x 4 meters. **Read The Article**

PSR Analysis: Last month, we reported that KAMAZ had received patents related to the these trucks. But the announcement that the truck itself has been produced and is passing tests was made only this month. **PSR**

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