



Tire Industry

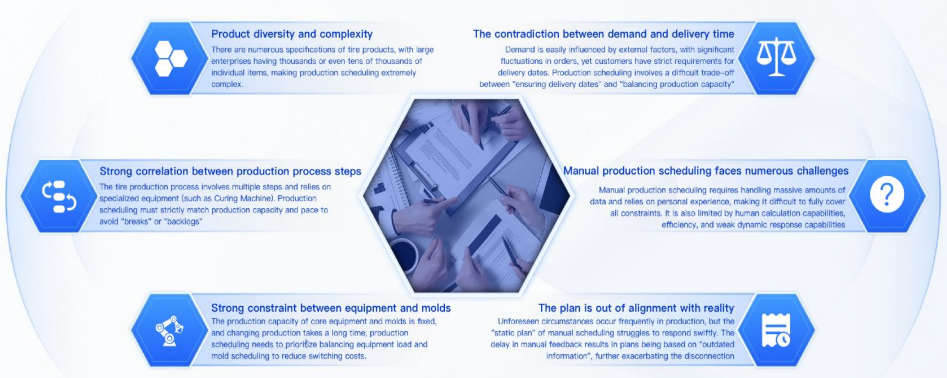
Advanced production scheduling solution

APS

- Enhance efficiency
- Ensure timely delivery
- Reduce costs
- Foster collaboration

The "production scheduling challenge" brought about by the uniqueness of the Tire Industry

Experience-driven static planning mode" for manual production scheduling
Unable to adapt to the "multi-constraint, high fluctuation, and strong collaboration" production scheduling requirements of the Tire Industry



ZQ APS Intelligent Production Scheduling System

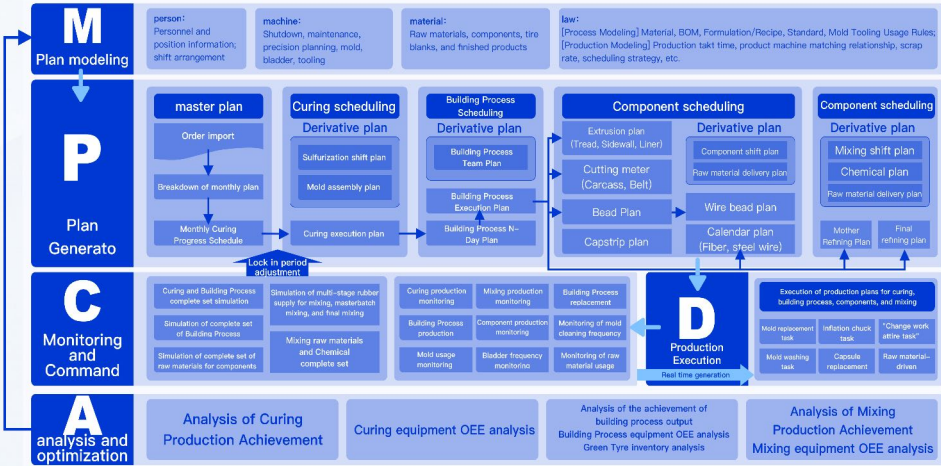
Relying on manufacturing big data and intelligent algorithms, we construct a production scheduling solution for the Tire Industry, balancing "demand fluctuations, delivery time, cost, and equipment efficiency" in the context of "multiple varieties, long processes, and strong constraints."

Support multi factory cross factory scheduling and integrate algorithm solvers to achieve global optimization



Adopt intelligent production scheduling strategies and advanced algorithms to create efficient business models

Through production simulation, we monitor the progress of material and tooling handover in real-time, utilize RTD for real-time scheduling and handling of production and quality anomalies, and achieve the goals of lowest cost, optimal inventory level, highest efficiency, and shortest delivery cycle through planning analysis and optimization adjustments.



The combination of APS and lean brings a new improvement model from "experience-driven" to "data-driven"

Based on real-time simulation and RTD real-time scheduling capabilities, APS is particularly suitable for dealing with uncertainties in the production process (such as equipment failures, order changes, material shortages, etc.), breaking through the limitations of traditional lean manufacturing, which relies on manual labor and struggles to cope with dynamic changes.

Provide enterprises with precise information flow, efficient resource coordination, and rapid problem response.



ZQ-APS enhances the quality and efficiency of tire production, ensuring every bit of production capacity is precisely utilized!

By implementing the ZQ-APS system, a certain tire customer has integrated the manufacturing execution system, achieved real-time collaboration between planning and scheduling and production execution, implemented a closed-loop from planning to execution, resolved the issue of capacity fluctuations, and maximized the utilization of manufacturing resources



benefit	numerical value	enhance
 Equipment utilization rate	12% ↑	Taking the Building Process as an example, by balancing the Building Process with the vulcanization process through the APS system, we can reduce production changes while ensuring task continuity. Compared to manual scheduling, equipment utilization has increased by 12%
 Shorten production changeover time	20% ↓	Through the strategy of "continuous production for orders of the same specification/pattern", APS can reduce the number of production changes. Combined with the scheduling plan for derivative molds, the production change time can be shortened by 20%
 Order delivery achievement rate	15% ↑	APS provides the capability of "capacity simulation under delivery constraints", assisting personnel in evaluating the impact of urgent orders on other orders, and can increase the delivery achievement rate by 15%
 energy consumption	5% ↓	The optimized production plan has significantly improved stability and continuity, balanced equipment loads, reduced equipment idle waiting, and achieved an energy consumption reduction of up to 5%

Company Introduction



ISO9001



ISO20000



ISO27001



CMMI3



AAAAA credit rating



National high-tech enterprise



ZQSOFT was founded in 2002 and is a leading domestic provider of comprehensive solutions for smart factories. Adhering to the development philosophy of "creating new value for customers", it relies on an excellent R&D team and rich project implementation experience, leveraging technologies such as AI, Big Data, and IoT to drive the digital and intelligent transformation of enterprises. It is committed to tailoring exclusive solutions for customers, achieving the goals of lowest cost, optimal inventory level, highest efficiency, and shortest delivery cycle. It helps enterprises build smart factories and enhance their core competitiveness.

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