УДК 811.111: 629. 331 (1-87)

R. Elenevich, A. Mileiko **History of AUDI**

Belarusian National Technical University Minsk, Belarus

Originally in 1885, automobile company Wanderer was established, later becoming a branch of Audi AG. Franz Fikentscher suggested the word "Audi", which translated from Latin means "listen" a new name for the company.

The first Audi automobile, the Audi Type A 10/22 hp (16 kW) Sport-Phaeton, was produced in 1915, followed by the successor Type B 10/28PS [1].

Audi started with a 2,612 cc inline-four engine model Type A, followed by a 3,564 cc model, as well as 4,680 cc and 5,720 cc models. These cars were successful even in sporting events. The first six-cylinder model Type M, 4,655 cc appeared in 1924. August Horch left the Audiwerke in 1920 for a high position at the ministry of transport, but he was still involved with Audi as a member of the board of trustees. In September 1921, Audi became the first German car manufacturer to present a production car, the Audi Type K, with left-handed drive. Left-hand drive spread and established dominance during the 1920s because it provided a better view of oncoming traffic, making overtaking safer. In August 1928, Jørgen the owner of Dampf-Kraft-Wagen (DKW), Rasmussen, acquired the majority of shares in Audiwerke AG. In the same year, Rasmussen bought the remains of the U.S. automobile manufacturer Rickenbacker, including the manufacturing equipment for eight-cylinder engines. These engines were used in Audi Zwickau and Audi Dresden models that were launched

in 1929. At the same time, six-cylinder and four-cylinder models were manufactured. Audi cars of that era were luxurious cars equipped with special bodywork.

Before World War II, Auto Union used the four interlinked rings that make up the Audi badge today, representing these four brands. This badge was used, however, only on Auto Union racing cars in that period while the member companies used their own names and emblems. The technological development became more and more concentrated and some Audi models were propelled by Horch or Wanderer built engines. Like most German manufacturing, at the onset of World War II the Auto Union plants were retooled for military production, and were a target for allied bombing during the war which left them damaged [2].

Overrun by the Soviet Army in 1945, on the orders of the Soviet Union military administration the factories were dismantled as part of war reparations. Following this, the company's entire expropriated assets were compensation. With no prospect of continuing production in Soviet controlled East Germany, Auto Union executives began the process of relocating what was left of the company to West Germany. A site was chosen in Ingolstadt, Bavaria to start a spare parts operation in late 1945, which would eventually serve as the headquarters of the reformed Auto Union in 1949. A new West German headquartered Auto Union was launched in Ingolstadt, Bavaria with loans from the Bavarian state government and Marshall Plan aid. The reformed company was launched 3 September 1949 and continued DKW's tradition of producing front-wheel drive vehicles with two-stroke engines. In 1964, Volkswagen acquired a 50% holding in the business, which included the new factory in Ingolstadt, the DKW and Audi brands along with the rights to the new engine design which had been funded by Daimler-Benz, who in return retained the dormant Horch trademark and the Düsseldorf factory which became a Mercedes-Benz van assembly plant. Eighteen months later, Volkswagen bought complete control of Ingolstadt, and by 1966 were using the spare capacity of the Ingolstadt plant to assemble an additional 60,000 Volkswagen Beetles per year. Two-stroke engines became less popular during the 1960s as customers were more attracted to the smoother four-stroke engines. In September 1965, the DKW F102 was fitted with a four-stroke engine and a facelift for the car's front and rear. Volkswagen dumped the DKW brand because of its associations with two-stroke technology, and having classified the model internally as the F103, sold it simply as the "Audi." Later developments of the model were named after their horsepower ratings and sold as the Audi 60, 75, 80, and Super 90, selling until 1972. Initially, Volkswagen was hostile to the idea of Auto Union as a standalone entity producing its own models having acquired the company merely to boost its own production capacity through the Ingolstadt assembly plant. Then VW chief Heinz Nordhoff explicitly forbade Auto Union from any further product development. Fearing that the company's heritage would disappear underneath VW badge engineering, Auto Union engineers under the leadership of Ludwig Kraus developed the first Audi 100 in secret, without Nordhoff's knowledge. When presented with a finished prototype, Nordhoff was so impressed he authorised the car for production, which when launched in 1968, went on to be a huge success. With this, the resurrection of the Audi brand was now complete, this being followed by the first generation Audi 80 in 1972, which would in turn provide a template for VW's new front-wheel-drive watercooled range which debuted from the mid-1970s onward. In 1980 the idea of engineer Jörg Bensinger was accepted to develop the four-wheel drive technology in Volkswagen's Iltis military vehicle for an Audi performance car and rally racing car. The performance car, introduced in 1980, was named the

"Audi Quattro", a turbocharged coupé which was also the first German large-scale production vehicle to feature permanent all-wheel drive through a centre differential. In the mid-to-late 1990s, Audi introduced new technologies including the use of aluminum construction. Produced from 1999 to 2005, the Audi A2 was a futuristic super mini, born from the A2 concept, with many features that helped regain consumer confidence, like the aluminium space frame, which was a first in production car design. In the A2 Audi further expanded their TDI technology through the use of frugal three-cylinder engines. The A2 was extremely aerodynamic and was designed around a wind tunnel. The engines available throughout the range were now a 1.4 L, 1.6 L and 1.8 L four-cylinder, 1.8 L four-cylinder turbo, 2.6 L and 2.8 L V6, 2.2 L turbo-charged five-cylinder and the 4.2 L V8 engine. The V6s were replaced by new 2.4 L and 2.8 L 30V V6s in 1998, with marked improvement in power, torque and smoothness. Further engines were added along the way, including a 3.7 L V8 and 6.0 L W12 engine for the A8. Audi manufactures vehicles in seven plants around the world, some of which are shared with other VW Group marques although many sub-assemblies engines such as transmissions are manufactured within other Volkswagen Group plants. Today, Audi is one of the most successful automotive companies.

References:

- 1. Mode of access: https://en.wikipedia.org/wiki/Audi. Date of access: 10.04.2016.
- 2. Mode of access: http://www.audi.com. Date of access: 10.04.2016.