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The Body and Cabin of the Onix Car Technology

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Abstract: This article analyzes the welding technology of the body and cabin of the Onix car. The selection of welding methods and the stages of the process are described in detail. In addition, the role of modern welding technologies in ensuring the structural strength and safety of the vehicle is highlighted. The article emphasizes the importance of welding technology in automotive manufacturing to achieve high quality and efficiency.

Keywords: Onix car, body, cabin, welding technology, spot welding, components, side walls, floor (base), rear panel.

Login. Light car industry is technological of progress the most advanced achievements in the embodied reached large industry from networks is one. His main from the goals one - to consumers safe, reliable, comfortable and ecological clean transportation tools presented is to reach.

This to the goal in reaching ONIX of the car main structural part was body and cabin good quality working exit important place occupies.

Car in the industry new car working in output, this first in line new body means . New car working to release on the road when putting, first in line body working release works Wings, hood, cargo division shell, bumpers, bodywork welding for following three kind welding method recommendation is: dotted welding; embossed welding and contact-welded welding.

Modern automotive industry industry permanent accordingly new technologies and materials working exit through transportation of tools quality to increase. The car is trying to reliability, durability and safety his/her main technician indicators are, they are construction elements good quality and right to the meeting directly. Especially the car's body and cabin durability — motor vehicle of the tool stream how under the circumstances effective performance, safety level high to be and far term service to do for It is necessary.

Like Chevrolet ONIX modern cars industry requirements in response working issued is, their construction to oneself typical strength and relief to provide designed for. Onyx of the car body and cabin combine process the most important from stages one is considered, because this process of the car general structure endurance and safety defines. Welding and in the automotive industry the most wide applicable and effective from technologies one is, with the help of it metal parts between strong and reliable connection harvest will be done.

The body is ONIX of the car external construction part is, that car structure, appearance and passengers safety provides. Bodywork main tasks and construction structural strength provide Internal parts protection to (passengers) and loads external protection coating to be service does.

ONIX car body many from components consists of, they together whole construction organization does. Bodywork main parts and of the following consists of.

- Rama (or carcass) this main metal carcass is, all other parts to him/her attached of the car strength and structural hardness provides
- Front panel engine and for the radiator frame task does, also, took light devices for base is considered.

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- The rear panel of the car back part, luggage compartment or luggage place harvest does.
- Side walls, doors located passengers external from the environment protection does.
- Floor (floor) body diaper part is, it is the car's all internal mechanic parts placement for foundation become service does.
- Roof part of the car upper part rain, sun and other external stranger from the effects protection does.

The **cabin** is ONIX of the car passengers sitting, management element located of the car internal Part of the cabin main Tasks: Passengers for comfortable and safe environment create Management tools placement Internal the environment from wind, heat, cold protection from doing consists of.

Modern ONIX car working release process high at the level automated, computer technologies based and complicated technological from operations consists of. In these processes robotics, digital design, smart materials, ecological clean painting technologies and energy saver methods wide is applied.

Below Chevrolet IONIQ of the car body and the cabin welded in preparation being used advanced welding method seeing let's go out Let's go.

ONIX of the car body and cabin welding technology. Light cars in the industry body and cabin constructive strength and safety them in preparation applicable welding technologies directly depends.

Welding is metal parts to tighten or electricity energy using combine process is a car body and cabin construction main parts one whole as in binding main role plays.

Modern light car in factories this process high at the level automated, especially point-based and robotic welding wide is applied. Below body and cabin elements welding main types, technological processes, equipment and innovative approaches about in detail information is brought.

Light cars detail parts welded in combination following main technological stages seeing Let’s go out. Light cars in the industry body and cabins welded in preparation one how many main welding from the methods We use these methods. every one known structural part and material worker for is selected. Weldable parts clear to positions we will place.weld parts stream kind impurities and from slag will be cleaned then welding parameters selectively we get (vine) power.metal thickness and others). In this we all one detail parts welding for necessary welding methods we choose.

Dotted welding – This method the most wide widespread method become in this this two (or from it more than) metal lists mutual attachment for **electricity from resistance** usable **resistance welding The type** is**.** Metal lists **two electrode** between will be placed and they between strong **electricity till** This is electricity. of the vine metal inside harvest did resistance as a result **heat** harvest It will be metal. surfaces heats, melts and pressure using unites. Usually this method with a thickness of 0.7 – 3 mm steel lists for is applied. **Advantages additional material** (electrode or wire) requirement does not. **solid** weld stitch harvest does.

Dotted welding in the process following parameters important is (1 table)

Dotted welding mode classification

1 table

№	Parameter	Classification
1	Vine power	3,000 – 30,000 amps
2	Pressure power	200 – 6,000 NGN
3	Welding time	0.1 – 0.5 sec
4	Electrode diameter	3 – 12 mm between
5	Thickness range	Usually 0.7 – 3 mm was steel lists

CO_2 gas with welding is half automatic or automatic welding method is, then electrode wire melted, metal surfaces combine for used. Welding zone protection to do for carbonate anhydride gas (CO_2) or CO_2 and other gases mixture used. Soluble electrode using metal heating will be combined Thicker

parts for (e.g., hooks, door Robots using automated in a way done increased CO_2 gas with welding following parameters important is (2 tables)

CO_2 gas with welding mode classification

2 tables

№	Parameter	Classification
1	Vine power	50 – 350 A (current size material and to the thickness related)
2	Tension	15 – 32 V
3	Wire diameter	0.8 mm, 1.0 mm, 1.2 mm (thickness depending on)
4	Gas expense	10–20 l/min (CO_2 or CO_2+ Ar)
5	Thickness range	0.7 mm – 12 mm metal (steel , low alloy metals)

With CO_2 gas welding (MAG) is today's on the day mechanical engineering, especially car in the industry wide applicable , effective and economic in terms of comfortable was welding technology. Its main advantages are speed, durability, suitability for automation and low cost of shielding gas. The MAG method provides reliable results in joining metal structures of various thicknesses and is constantly being enriched with new technologies.

Inspection of welds in the body and cabin of a car that has been prepared by welding is of great importance. At the initial stage, operators visually inspect the welds (with the naked eye), eliminating any deformation, burning of the base metal, or cracks. Then, nowadays, welds and joints are inspected using modern methods such as ultrasonic inspection, X-ray, magnetic particle testing, In factories, vision-sensor robots inspect welds in real time. The location, depth, width, and deformation of each defect are analyzed, and quality indicators are automatically studied.

Conclusion: The technology of welding the body and cabin of the Onix car provides high quality and durability that meets the requirements of modern automotive industry. Properly selected welding methods and high-quality work result in an increase in the service life of the car and ensure road safety. Therefore, it is very important to perfectly organize the welding process and strictly implement quality control.

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