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Nippon Avionics Co., Ltd.

<http://www.avio.co.jp/english/>

**Avio releases a seam sealing equipment, model NAW-6100,
which is capable of sealing metal package of large sized devices
with improved rigidity of device sealing
by using 4KVA power supply, the largest capacity in the industry!**

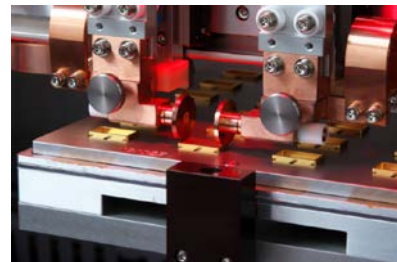
Nippon Avionics Co., Ltd. (Avio) (Headquarters: Shinagawa, Tokyo. President: Mr. TAKEUCHI, Masato), who has the world largest share in the metal package seam sealing equipment*, will release an automatic seam sealing equipment, model NAW-6100, capable of sealing metal package of large sized devices for optical communication devices, imaging devices and mirror devices.

*Based on the research by Avio in August 2019



【NAW-6100】

Seam sealing in process



In recent years, demand for optical communication devices is increasing due to the enhancement of optical network related to 5G communication and increase of base station. Furthermore, because seam sealing is employed for assembly of mirror devices for LiDAR used for self-driven automobile, demand for seam sealing of metal package for large sized devices is increasing.

NAW-6100 is capable of seam sealing various large sized devices by increasing the capacity of welding power supply to 4KVA, the largest capacity in the industry today. Reliability of seam sealing is improved by securing sufficient sealed width of lids having a certain thickness. Furthermore, fine welding control performance developed for sealing of small sized devices is inherited, which helps to realize high quality seam sealing with minimum damage to the works.

In the future, Avio plans to continue satisfying increasing customers' requirements by deploying this welding power supply for incorporation into in-line systems and pursuing for higher speed and improved reliability.

■ Features

1. Quality of large sized device sealing is improved by use of a large capacity power supply, the largest in the industry.

Large capacity power supply of 4KVA, 8000A maximum secondary current, is equipped. By increasing the generated heat amount, sufficient sealed width is secured even in the sealing of large sized devices with a large heat capacity, contributing to the reduction of leak defect ratio and improved joining strength.

Sealing of packages with thick lid of 0.12mm thickness or more, which was difficult to seal in the past, is now possible, resulting in not only improvement of the rigidity of devices after sealing but also increased freedom of lid selection and freedom of design (shortening design time).

2. Yield ratio is improved by the highest lid mounting accuracy in the industry.

Misalignment of lid position is reduced by the highest lid mounting accuracy in the industry.

Example) Work size of □25mm or less. Mounting accuracy: $\pm 0.035\text{mm}$

3. Productivity is improved by high speed sealing.

Two sides of a package are sealed at one time at the speed of 10mm/sec. for improved productivity.

Example) □5mm package sealing takes approximately 5.5sec.

4. NAW-6100 accommodates various package sizes and lid shapes.

One NAW-6100 can handle seam sealing of □2mm to □150mm size packages.

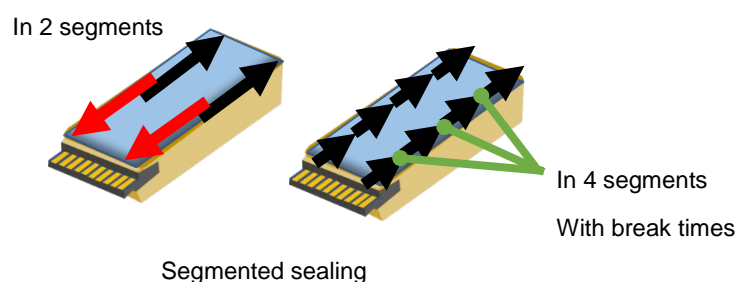
Furthermore, it can handle flat lid, cap lid and lid with a window.

5. Flexible program setting allows work damage reduction and welding quality improvement.

Different from the frequency fixed type power supply common for seam welding, Avio's unique power supply dedicated to seam sealing allows free setting of wave height and time.

This feature helps to keep the stress to the package to a minimum level, and to reduce cracks and deflection. Furthermore, because sealing can be accomplished with minimum heat required, generation of outgas is suppressed and impact to internal devices is reduced.

On top of that, weld start position and weld end position can be freely designated in terms of coordinates. As a result, occurrence of crack is suppressed by keeping the stress to a minimum level by segmenting the sealing in case of large sized packages with high heat accumulation.



6. Flexible customization

- ① Depending on the production volume, process capacity and arrangement of annealing chamber* can be selected for reduced standby time before seam welding and for improved productivity.

*Annealing effect: By heating the package or the lid in vacuum, adsorbed moisture, gas inside the adhesive and other organic substances can be eliminated so that device characteristic after the sealing can be maintained.

- ② Particle suppression

By use of a HEPA filter, impact by dust can be suppressed to a minimum level. This feature is useful for acceleration sensor, mirror device and imaging device.

- ③ Lid feeding system

Lids can be fed in the forms of tray feeding (standard), lid cassette and parts feeder.

For Further Information, Please Contact;

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Consultation regarding seam sealing

Please contact us for sample sealing, or consult with us if you have any problem regarding product quality or tact time in seam sealing.