

## **VEHICLE MOUNTED WIRE SPINNER**

### **Website Summary of Project Details**

The South Australian Wine Industry Association (SAWIA) is actively involved in improving Work Health and Safety outcomes for wine industry employers. SAWIA provides leadership, support, advice and a range of resources and tools to assist employers with a variety of different safety issues.

SAWIA is pleased to launch a new product involving the Manufacturing Drawings and a Standard Operating Procedure (SOP), for a Vehicle Mounted Wire Spinner that is used for vineyard development where trellis and fencing is erected to support vines.

The development of the Vehicle Mounted Wire Spinner Manufacturing Drawings and SOP was made possible by funding received from Employers Mutual Limited through their Member Incentive Program. SAWIA through its OHS Committee managed the project and engaged Cadgile Engineering to develop the Manufacturing Drawings and SOP.

Lifting wire coils onto a wire spinner is a common activity in the vineyard when developing a vineyard, redeveloping, replanting, or regrafting vines. This activity is usually done by two people manually lifting wire coils individually onto a wire spinner that is attached to a vehicle. The load can be significant to any person especially when it involves lifting an average of 60kg. There has been a history of injuries with lifting the heavy wire coils and recently there was a serious accident that resulted in 2 employees getting injured.

This project is considered by SAWIA and EML as beneficial to reduce the cost and frequency of manual handling injuries related to lifting heavy coils of wire on to wire spinners in vineyard operations. If this system is implemented it will eliminate one aspect of heavy manual handling that is undertaken within the vineyard and other places of work.

### **BUSINESS CASE**

A member of SAWIA developed the concept and requested SAWIA to put the idea forward to EML's member incentive program to allow the benefits of this concept to be realised across the wine industry. The member company has retained all the intellectual property that prevents the "concept" being the property of any party other than itself.

SAWIA has a written agreement in place that the member company will retain all intellectual property rights in the Drawings and the Engineering Concept.

### **Project Description**

This project involves the development of manufacturing drawings and a Standard Operating Procedure (SOP) for a Vehicle Mounted Wire Spinner. The machine is used for vineyard development where trellis and fencing is erected to support vines.

Succinctly, the following has been developed:

- Manufacturing drawings for the following:
  - Storage rack system that can effectively cater for various types / grades of wire;

- Vehicle Mounted Wire Spinner unit; capable of being fastened to a trailer, tray-top and/or ute. It can be easily dismantled to affix to the relevant vehicle safely.
- An SOP accompanying the manufacturing drawings to ensure that the correct procedure to use the Wire Spinner is followed, ensuring a safe procedure is followed eliminating the manual handling of the wire coil from the process

These manufacturing drawings and SOP are now available for companies to have the Vehicle Mounted Wire Spinner built without any manufacturing drafting costs.

### **Features of the Vehicle Mounted Wire Spinner**

- It is capable of being fastened and operated from a trailer, tray-top or ute, that includes a storage rack system that can effectively cater for various types / grades of wire;
- The Wire Spinner is accompanied with a storage rack system that eliminates the requirement for manual handling aspect of lifting heavy coils of wire (60kg average per coil). This is done by the user being able to use a forklift to unload the wire coils (using a forklift) from a delivery truck and placed into purpose built storage racks;
- The storage rack, loaded with wire coil, is then lifted by forklift onto the Wire Spinner and locked into place. The wire coil is then rolled and placed onto a the wire spinner spool device eliminating the manual handling aspect of this activity;
- The storage rack has capacity for nine (9) coils of wire, plus two (2) coils on the wire spinners giving a total capacity of eleven (11) coils of wire;
- The storage rack is secured to the base framework with a latch that clips the two together;
- The Wire Spinner is 1 meter in width and 1.8 meters in length;
- It has one (1) or two (2) spinner capability, with a Barb Wire spool included as well;
- The Wire Spinner and storage rack has a total weight capacity of 820 kg inclusive of eleven (11) coils of wire, and one (1) barbwire coil OR approximately 130 kg for the Wire Spinner unit and storage rack with no wire coils.
- The wire spinner spools can operate in different directions simultaneously so the user does not have to load the coils in any particular way;
- The wire spinner spool has a cover that extends down over the sides eliminating potential entanglement areas;
- It has a tension activated brake system to avoid overspin from occurring, and a steel spring applies even pressure to the coil brackets which acts as the brake system;
- It is designed to take all types and grades of wire up to 60kg per coil, which have roughly same coil diameter;
- It is designed so that the user can either manually pull the wire out of the spinner OR it can be fixed to a solid post and driven at no more than 10km p/hr;
- Wire Spinner unit operates on a horizontal axis, and is designed so that it spins above the tailgate whilst it is closed.

The Vehicle Mounted Wire Spinner is not only able to be adopted throughout the viticulture industry, but all agriculture industries that involve wire trellis and in particular general fencing.

With the aid of the storage racks and purpose built Wire Spinner framework the “concept” is to mechanically (forklift) move the coils of wire from the delivery vehicle to the custom built wire spinner without the need to do any manual lifting.

**The Manufacturing Drawings and SOP for the Vehicle Mounted Wire Spinner are Available Free to all Wine Industry participants!**

**To request a copy of the Manufacturing Drawings and SOP please contact one of SAWIA’s staff on (08) 82229277 or email [admin@winesa.asn.au](mailto:admin@winesa.asn.au)**

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