



DAVIS › STANDARD®

Where your ideas take shape.



Advance Program

Liquid Coating Facility – Lab Line 1

Overview

Consider the possibilities. Let our liquid coating facility assist you to:

Develop new products before you go to the expense of trials on your production equipment.

Explore new processes and markets.

Consider new equipment designs that will drive flexibility and efficiency into your operations

Gain early entry into a market by scaling up with our equipment

Reduce your switching costs as you look for lower cost resins

Features

These are a few of the many products capable of being tested in our liquid coating laboratory:

- Window Film
- Fire Retardant Insulation
- Ink-Jet Paper
- Tape
- Label
- Medical Patches
- Graphite Composite
- Sand Paper
- Roofing
- Facial Wash Cloths
- Thermal Paper
- Thermal Transfer Ribbons
- Battery
- Carbonless
- Masking Tape
- Protective Wrap
- Fluorescent Paper
- Metalized Paper
- Printing Plates
- Filament Tape
- Phenolics
- Lighted Signs
- Road Signs
- Siliconized Liner
- Stamps

Liquid Coating Facility-Lab Line 1

Our Liquid Coating Lab is the perfect place to test your formulations, determine methodologies, perfect techniques, develop new products, evaluate equipment and take your new products to the next level. Coating Lab Line 1 offers the following for your testing needs:

- Primary turret unwind: features arm pedestal design, regenerative motor braking or pneumatic brakes.
- Splicer: single direction with speed compensated controlled tail length, lap splice with core detection and splice tracking, zero-tail length (butt splice) capability.
- Corona treater: single side treatment, maximum power 15 kw.
- Pull rolls: provides tension isolation.
- Universal coater: (series 4000) cartridge-style machine that can be configured into multiple coater configurations through the use of quick change roll out carts.
- Dryer: the 60 foot (18.3 m) convection dryer is composed of (3) 20 foot (6.1 m) zones. Each zone has independent top and bottom air flow and temperature control. Direct fired natural gas burners provide the heat source. A wide range of drying nozzle configurations can be demonstrated. The dryer is designed for solvent and aqueous coatings. Critical process parameters such as an air temperature, air flow, solvent concentration, and web temperature are monitored and recorded in our Integrator PRO.
- Ultraviolet curing station: allows for curing via photo initiation.
- Cooling pull roll & web guide: used to cool and guide the web prior to the remoisturizer.
- AC vector drives
- Steamex remoisturizer: process steam applied to both sides of the web or either side independently.
- Multifunctional cooling section with laminating nip: used to cool the web after the dryer, and to laminate (or interleave) a second web from an auxiliary single position unwind, capable of 140 PLI.
- Auxiliary single position unwind: features manual side-lay and squaring, air cooled pneumatic operated disc brake. Mounted on a movable base so it may also be positioned for wet-bond laminations.
- Turret winder roll changer: this two direction machine with stationary knife has center, surface, and surface with center assist winding.
- Differential offset winding: features slitting capabilities.
- SurfaStart 1000 Winder: pneumatic loading of secondary arms permits the operator to control the hardness of the finished roll.
- Integrator PRO Process Control System: supervisory control system provides monitoring and data logging of all critical operating parameters.
- Coating techniques: many configurations available including; doctor blade, rod, variations of offset gravure, variations of reverse gravure, variations of direct gravure, slot die, contact die, 2 roll smooth, 3 roll smooth, flex bar, hot melt (slot die) and many more.

Testing Equipment

- Stereoscopic type microscope, power 7 - 10
- Black light
- GES Mod. PT830SS 30"x24" (76mmx61mm) platform scale 1500 lb. (680.3 kg) capacity
- GES Mod. HP-20K 13.5"x15" (76mm x 61mm) platform scale 21 lb. capacity 680.3 kg
- GES Mod. GP-12K 13.5"x15" platform scale - 12 kg. capacity
- Hercules high shear viscometer - Mod. ET-24-6
- Brookfield Mod. RVDVII+ viscometer
- Brookfield Mod. RVRTD viscometer
- Zahn cups (1-5)
- Oxford Lab-X 3000
- Ohaus MB200 solids tester
- Computrac MX100 moisture analyzer
- Precision convection oven Mod. STM80
- Oakton PH10 series PH/MV/8C Meter
- 874 thermocouple thermometer 1208 F - 2008 F
- Quincy lab Mod. 20 GC lab oven
- Hydraulic shop press P/N 1884 - 10 ton
- Ohaus champ bench scale - 250 lb. capacity
- PARO tester - paper, foil, & film reel hardness
- Strobe light
- Brightness - gloss meter
- Sheffield smoothness tester

Line Specifications

Operating Speed Range	15 to 3000 FPM (5 to 900 MPM)
Web Width	18 or 36 inches (460 to 900 mm)
Tandem Operation	18 inches only (460 mm only)
Tension	12 to 160 lbs. (6 to 70 kg)
Turret Unwind Roll Diameter	Max. 36 inches (Max. 900 mm)
Turret Unwind Core Diameter	3 inches, 6 inches ID (75 mm, 150 mm ID)

Auxiliary Unwind Roll Diameter	Max. 30 inches (Max.750 mm)
Auxiliary Unwind Core Diameter	3 inches, 6 inches ID (75 mm, 150 mm ID)
Turret Winder Roll Diameter	Max. 36 inches (Max. 900 mm)
Turret Winder Core Diameter	3 inches, 6 inches ID (75 mm, 150 mm ID)
Surface Winder Roll Diameter	Max. 60 inches (Max. 900 mm)
Surface Winder Core Diameter	3 inches, 6 inches ID (75 mm, 150 mm ID)