







What is Surface Finishing and How Does it Impact our Lives?

## Canadian Association for Surface Finishing



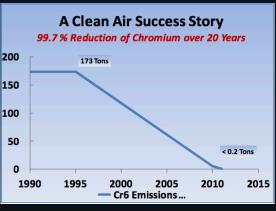














CASF is the only surface finishing industry association in Canada and has three important roles:

### Voice of the Industry "Stronger Together"

 As the voice of members, CASF plays an important advocacy role by working with all levels of government on issues related to our industry

#### **Helping our Businesses Succeed**

 This is achieved through of valueadded services and networking opportunities that benefit our members

#### **Helping our Industry Succeed**

 CASF takes a leadership role in helping our members succeed by engaging economic, strategic and environmental issues and changes that affect everyone in the surface finishing industry

### **CASF Activities** and Initiatives











- We link companies, professionals and technical experts throughout the industry together through:
  - **Industry and Networking Events**
  - **Advocacy and Outreach Programs**
  - **Key Committees**
  - Industry Services and Online Resources
- A strong mandate is education... training and outreach; partnerships with colleges and universities; education and marketing programs such as the Bright Design Challenge!
- Advance an environmentally and economically sustainable future for the finishing industry
- Promote the vital role of surface technology in the global manufacturing value chain
- The Surface Finishing Industry in Canada employs over 38,000 in Canada

## What is the Surface Finishing Industry?







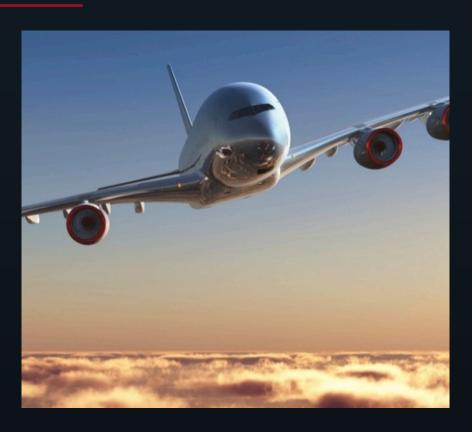




The North American surface finishing industry suppliers provide chemicals, metals, equipment, research and advanced technical services.

The industry includes a wide range of businesses – from small firms to Fortune 500 companies with a regional and global presence.





# What is Surface Finishing?











Surface Finishing is a general term for operations that are conducted to improve the physical and/or mechanical properties of a metallic or non-metallic object.

Examples of such properties are:

appearance

corrosion

resistance

electrical conductivity

magnetism

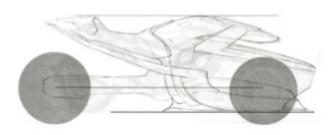
hardness

wear resistance

color, and solderability









#### Surface Finishing

#### What is it?

The process of altering the surface of an object for the purpose of enhancing its apperance or funtional properties

There are many functional properties including

> corrosion resistance abrasion resistance wear resistance electrical insulation thermal management magnetism light reflectivity and many more

Surface finishing provides conveniences for use in our everyday lives

#### Industry

Surface finishing covers an incredibly large area of industry that has an influence in a majority of parts of our everyday lives. Industry examples include: automobiles, airlines, computer equipment, jewelry, medical, household appliances, construction hardware and many more.

There are numerous types of surface finishing including: brass, gold, nickel, zinc, anodizing, tin, electroless plating and many more.





#### How to incorporate surface finishing

-use surface break-ups to reduce the visual "heavyness" -use surface finishing to create style and character -make surface finishing essential to the design -help explain the design using surface break-ups and surface finishing -make the brand and image noticeable in any situation using surface

-use surface finishing to alter proportions and decieve the eye















# What is Surface Finishing?











- Removing material or reshaping the item
- Adding material to the item's surface by chemically altering it



•Also referenced as "surface technology" – our processes transform the way materials and products work and look, and enhance their benefit to society

## Surface Finishing... We can't live without it!









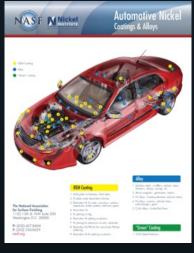














Surface finished products are **EVERYWHERE** 

- Benefits of surface finishing:
  - Durability
  - Prevention of corrosion
  - Cosmetic/aesthetic



## Surface Finishing Facts



 Ultimately, natural resources are conserved by the use of surface finishing for preserving products



Almost every major industry, small and large depends on surface finishing



**New finishing technologies are emerging** that are allowing us to effectively protect and finish more complex substrates and designs



We are an "enabling technology" for the manufacturing value chain. le. Equipment and/or processes that, alone or in combination with associated technologies, provides the means to generate giant leaps in performance and capabilities of the user.

## Industries That Rely on Surface Treatment













- Automobiles / Motorcycles
- Marine
- Agriculture
- Aerospace / Defense
- Telecommunications
- Computer Equipment
- Construction / Hardware / Tools and Dies
- Electronics / Electrical Hardware
- Appliances

- Fasteners
- Jewelry
- Mining / Steel Mill Products
- Medical / Orthopedics / Pharmaceuticals
- Sporting Equipment / Bicycles / Toys
- Oil & Gas Equipment
- Food processing Equipment
- Furniture



## Finishing Technologies: Examples











- Conversion coatings Anodizing, Chromating, Phosphating, Passivating, etc.
- Electroless Plating
- Electrolytic Plating
- Thermal Spray
- Painting Powder Coating, E-Coating, Wet Paint, etc.
- Thin Film Deposition
   Vacuum Metalizing or Physical Vapor
   Deposition

# OUR COATINGS AND TREATMENTS ARE USED EXTENSIVELY IN PASSENGER





Canada employs over 38,000 people in the Surface Finishing Industry!

Some of the world's most advanced Surface Finishers are in Canada!



### Surface Finishing Design Project: The Bright Design Challenge



This spirited design competition provides students with the fundamentals of surface finishing and promotes the benefits and uses of finishing technologies in automotive, motorcycle, recreational vehicle, heavy truck, architectural and many other industries.

#### IT'S A DESIGN COMPETITION!









### **CASF** Past Contestants... Where Are **They Now?**









Name	<b>Current Position</b>	Name	<b>Current Position</b>
Sang Hoon S.	Art Director at Taphandles LLC	Ludwin C.	Senior Industrial Designer at Vapor Shark
Chris P.	Senior Designer at GM CCS Adjunct Faculty	Mark S.	Product Designer at American Expedition Vehicles
Chad P.	Designer at GM	Adam H.	SRT Designer at Chrysler Group LLC
Matt M.	Designer at GM		
Joseph D.	Director at Stucky Studios	Patrick S.	Designer/Estimator at Morley Companies, Inc.
Ken (Rob) C.	Strategic Design Manager at GM CCS Adjunct Faculty	Kelly S.	Senior Industrial Designer at Knack, LLC
Nick S.	Exterior Designer at Chrysler	Stephen R.	Industrial Designer and Creative Digital Sculptor at GM
Jun Y.	Assistant Manager at GM Korea	Yuyol L.	Digital Surface Modeler at Volvo Trucks
Mykola K.	Creative Director at	•	
	Hyundai Motors America	Corey H.	Freelance Designer
Dong Tran	Lead Designer at ICON Aircraft	Minwoo S.	Current CCS Student
William Zack W.	Senior Creative Director at GM CCS Adjunct Faculty	James Y.	Automotive Designer at Chrysler

























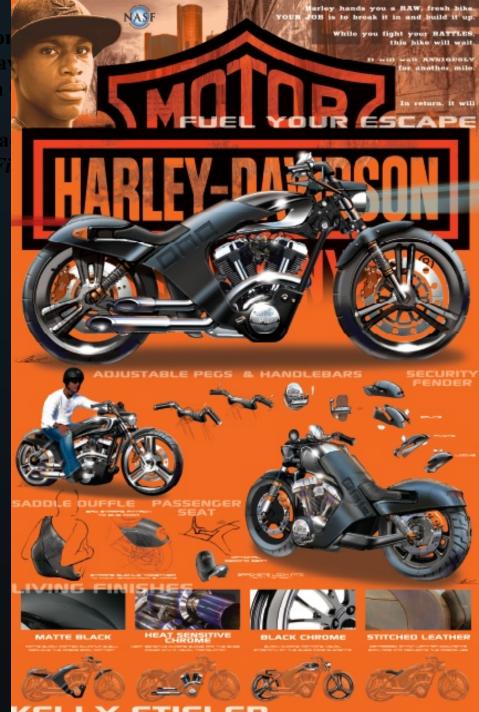






Kuntz spor Harley-Dav Bright Design

> 3<sup>rd</sup> Pla Living Fi























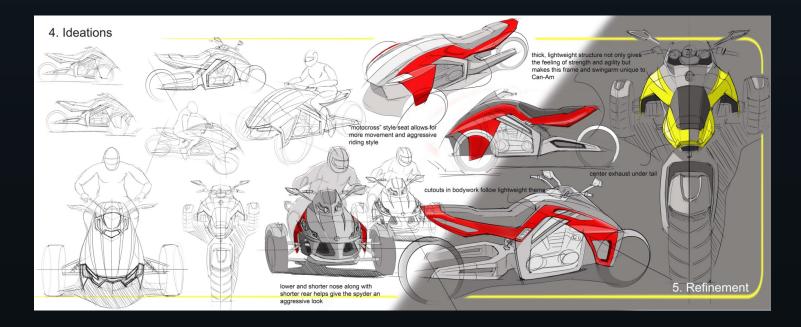






































# WE ALL DEPEND ON SURFACE FINISHING!









To learn more or to explore careers in Surface Finishing visit CASF.CA



CANADIAN ASSOCIATION FOR SURFACE FINISHING