



**OPEN SPACE NOZZLE**  
8 – 10 APRIL 2016

**Product Description**

**Penerangan Produk**

The project is made to deliver the fabrication of a new type of GMAW nozzle as it is changing the flow of gas during GMAW process. The flow of gas is depend through the different number of hole of the nozzle to make a shielding gas pattern to protect weld bead from Oxygen. Different number of hole created a different speed of velocity. If the number on the hole is decreased, the velocity of the nozzle will increased. The material that were used for nozzle is brass since it is easy to fabricate and the cost for brass is lower than the current material use for nozzle. Therefore it can reduce the costing to make the nozzle. The nozzle can reduce the consumption of shielding gas.

**Problem & Causes**

**Masalah & Punca**

- Conventional nozzle is unsuitable for welding outdoors
- Movement of shielding gas during the process created porosity
- Increasing the shielding gas output will increase the cost and it may affect the weld bead

**Originality & Novelty**

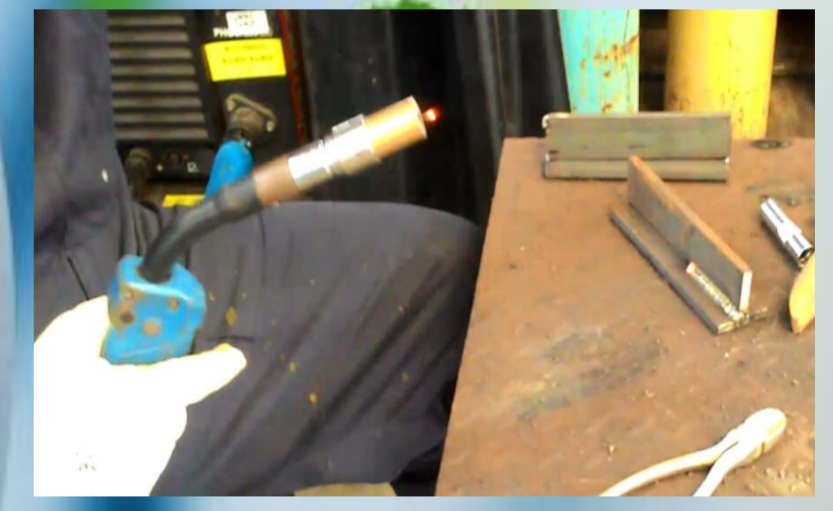
**Keaslian & Novelti**

- WASTE TO WEALTH
- 30-45 % reduce wasted shielding gases

**Eco- Friendly Aspect**

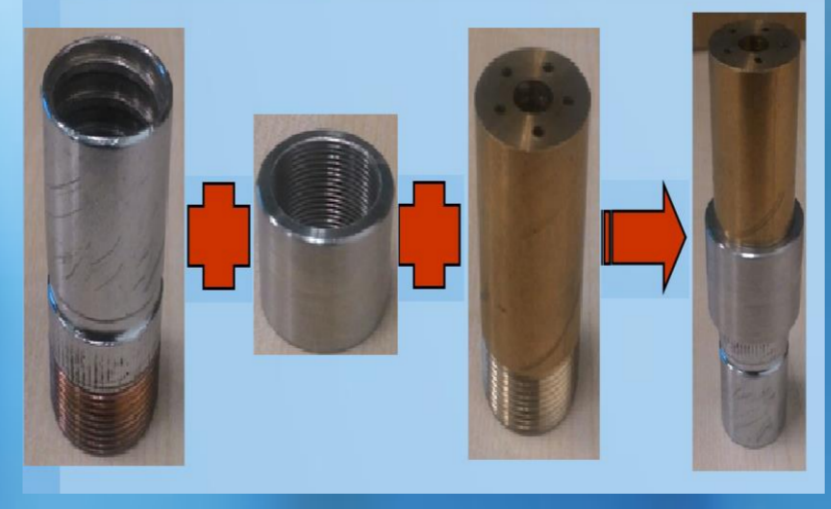
**Aspek Mesra Alam Sekitar**

- Less smoke from welding.
- Ergonomic
- Friendly user



**Application & Market Potential**

**Aplikasi & Potensi Pasaran**



**Achievement**



**WON 1 GOLD MEDAL**

**Supervisor**

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1	A DEVICE FOR WELDING WORKPIECES TOGETHER	Patent No.:	Legal Status:	Relevancy: 100%	Add To Basket
	Application No.: PI 2010002963		DEEMED WITHDRAWN		
	Date of Filing: 22.06.2010	Date of Grant:			
	IPC No.:				
	Applicant: S-LINK SDN. BHD.				
2	METHOD FOR ADJUSTING NOZZLE CLEARANCE OF LIQUID APPLICATION APPARATUS, AND LIQUID APPLICATION APPARATUS	Patent No.:	Legal Status:	Relevancy: 84%	Add To Basket
	Application No.: PI 20091031	MY-151624-A	GRANTED AND PUBLISHED		
	Date of Filing: 30.11.2006	Date of Grant: 30.06.2014			
	IPC No.:	B05C 11/00;B05C 5/00;B05C 11/00;B05D 1/00;G02F 1/1339			
	Applicant: MUSASHI ENGINEERING, INC.				
3	This application is still under 18 months.			Relevancy: 78%	Add To Basket
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4	NOZZLE ROTATION MECHANISM AND APPLICATION DEVICE THEREWITH	Patent No.:	Legal Status:	Relevancy: 78%	Add To Basket
	Application No.: PI 2011005128		FULL/MODIFIED EXAM. TO DO		
	Date of Filing: 23.04.2010	Date of Grant:			
	IPC No.:	B05B 3/12;B05C 5/00			
	Applicant: MUSASHI ENGINEERING, INC.				
5	METHOD OF CONTROLLING ARC WELDING PROCESSES AND WELDER USING SAME	Patent No.:	Legal Status:	Relevancy: 78%	Add To Basket
	Application No.: PI 20011120		DEEMED REFUSED		
	Date of Filing: 12.03.2001	Date of Grant:			
	IPC No.:				
	Applicant: LINCOLN GLOBAL, INC.				