

Company name:	Kwok Tak Seng Inc. (Hong Kong)
School:	Kwok Tak Seng Catholic Secondary School
Country:	Hong Kong (Shatin)
Distance to international competition:	11470.47KM
History:	Kwok Tak Seng Inc.(Hong Kong) is an experienced competitor of the MATE ROV competition. We had been the top five in the contest for seven years already and we had travelled to the international contests in 2009 and 2010. Three members of our team are returning to the contest for the second time while three members of our team are new to the contest.

<h2><u>Company photo</u></h2> 			<p>Sze Tong, Chan (Grade 12)</p> <p>Chief Executive Officer Mechanical Engineer 3d Graphics Designers Public Affairs Manager</p>
	<p>Yuet Ming, Leung (Grade 12)</p> <p>ROV Designer Electronic Engineer Programmer</p>		<p>On Sang, Chan (Grade 12)</p> <p>Mechanical Engineer ROV Framework Designer</p>
	<p>Wai Sing, Ngan (Grade 11)</p> <p>ROV Designer Electronic Engineer Programmer Pilot</p>		<p>Cyrus, Lee Kin Yuen (Grade 10)</p> <p>Safety Manager ROV Operator Control Manager</p>
	<p>King Ho, Wong (Grade 10)</p> <p>Mechanical Engineer ROV Framework Designer Co-Pilot</p>		<p>Kai Hei, Ng (Grade 9)</p> <p>Chief Financial Officer Operating Officer Safety Manager Public Affairs Secretary</p>

Roved Team Name:	KTSCSS Dolphin
Toil Cost:	HK\$ 11,850
Total-hours to design and build:	220 hours
Primary materials:	Acrylic cylinder Aluminum Strip
Dimensions:	0.3m ×0.27m × 0.33m
Weight:	7.3Kg



Safety features:

- 25 amp fuse in place
- Tether covered in abrasion proof wrap
- Thruster with fabricated shields
- No sharp edges
- Safety partitions on all thrusters
- Safety warnings on moving parts

To protect the ROV and the environment, we used fuses to protect the electric circuit of ROV and we used the waterproofed plugs to avoid environmental destruction due to electric leakage.

Also, shelters of motors are fabricated to protect the ROV itself from being hit by the propeller blades and this can also reduce the chance for the propeller blades to hurt other creatures.

On the surfaces of the shelter, caution signs are marked to warn people off danger. To minimize the danger, tethers are also twisted tightly to prevent shelter from being winded around.

Special features:

- High mobility
- Use of Arduino boards, ESC, H-bridges to control the vehicle
- Higher speed movement with brushless motors
- Equipped with a pair of pliers to hold and grab things firmly and easily and a rotational arm to turn the wheel.
- Water-proofed multiple cameras provide different views of the environment.

Photos of the ROV

