<table>
<thead>
<tr>
<th>Company name:</th>
<th>Kwok Tak Seng Inc. (Hong Kong)</th>
</tr>
</thead>
<tbody>
<tr>
<td>School:</td>
<td>Kwok Tak Seng Catholic Secondary School</td>
</tr>
<tr>
<td>Country:</td>
<td>Hong Kong (Shatin)</td>
</tr>
<tr>
<td>Distance to international competition:</td>
<td>11470.47KM</td>
</tr>
</tbody>
</table>

**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.

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**Company photo**

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

<table>
<thead>
<tr>
<th>Safety features:</th>
<th>Special features:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 25 amp fuse in place</td>
<td>• High mobility</td>
</tr>
<tr>
<td>• Tether covered in abrasion proof wrap</td>
<td>• Use of Arduino boards, ESC, H-bridges to control the vehicle</td>
</tr>
<tr>
<td>• Thruster with fabricated shields</td>
<td>• Higher speed movement with brushless motors</td>
</tr>
<tr>
<td>• No sharp edges</td>
<td>• Equipped with a pair of pliers to hold and grab things firmly and easily and a rotational arm to turn the wheel.</td>
</tr>
<tr>
<td>• Safety partitions on all thrusters</td>
<td>• Water-proofed multiple cameras provide different views of the environment.</td>
</tr>
<tr>
<td>• Safety warnings on moving parts</td>
<td></td>
</tr>
</tbody>
</table>

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.

Photos of the ROV

![Photos of the ROV](image_url)