

# Documental, Scientific and Commemorative dive on the “Milan” boatwreck.



Major Lake (Lago Maggiore), VB, Italy

## BOAT “MILAN”



On the 7th of November 2007 the VV.F. during a training session conducted by Diving Forces of the Regional Directorate of Lombardia in collaboration with the VV.F. Command of Verbania, have recovered the wreck of the famous Boat “Milan”. Belonging to the “Navigazione Lago Maggiore” (the Major Lake Navigation Company), the boat sank on September 26th 1944 while carrying military soldiers and civilians from Laveno (VA) to Intra (VB) because of the damages inflicted by three Anglo-American aircrafts. Many were the victims.

## CONDITIONS AT DEPTH

More than 50 meters long and 6 meters wide (see image), the boat is broken into two sections lying about 20 meters away from each other.

One part is at around -230/35 meters on a flat bottom and the other lies at around -215/20 meters on a slightly sloping bottom.

Despite the extreme depth the images taken from the R.O.V. of the VV.F. are showing an excellent visibility providing a good vision even of the details:

1 - RAI TG1 at 8:00pm:

<http://news.centrodiascolto.it/video/id=215046/d=2008-01-23/w=guerra+mondiale>

2 - more complete service on “Azzurra TV”:

[www.vcoazzurratv.info/index.php?option=com\\_content&task=view&id=12024&Itemid=86](http://www.vcoazzurratv.info/index.php?option=com_content&task=view&id=12024&Itemid=86)

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## EXPLORATION PROJECT DDE

DDE, Dynamic Dive Exhibition, has organized a dive onto the boat “Milano”.

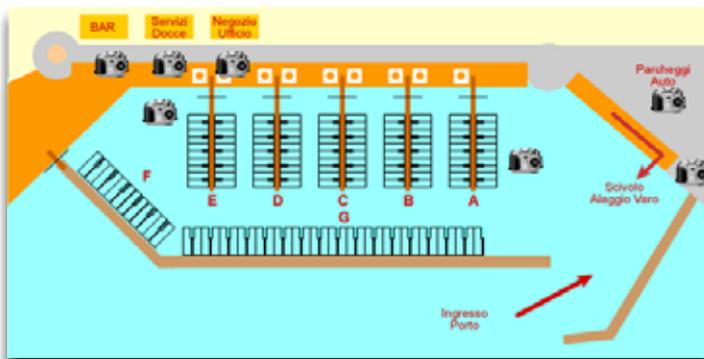
The first dive where human beings actually “touch” the wreck, and the deepest wreck dive ever performed.

World record. The objectives are:

- 1- the documental aspect;
- 2- the scientific research in extreme dives;
- 3- the commemoration of the sacrifice, both civil and military, of those years.

## PREPARATION OF THE LAND FIELD

In order to avoid transfers to the base camp of DDE in Maccagno (on the other side of Major Lake), will be set up by the Provincial Coordination (VB) of the Volunteer Civil Defense and by the VV.F., a camp very near to the dive site in a large and well-served area granted by the Tourist Port of Verbania (see image).



## POSITION TO LAND. FIRST PREPARATIONS

The “Milano” is located at a distance of about 205 metres from the coast of Verbania (“punta Castagnola”).

The operation will start with the re-location of the boat made by the VV.F., discoverers and key supporters of the entire operation.

With the use of a R.O.V. (Remote Operating Vehicle, underwater robots - see image “ROV”) the Divers team of the Regional Directorate of Lombardia, in



collaboration with the Command of Verbania, will search the 2 sections of the vessel to decide, along with the DDE, which will be explored on the basis of not only the difficulties of immersion and the visibility of the wreck but also to a large number of other variables including the mooring stability of the surface structure.

## PREPARATION OF THE WATER FIELD

The positioning of the surface structure will start once the descent line will be fixed and tight to the bottom. This is the barge of "Prini" company from Belgirate (VB) - see image, technical partner of the event.



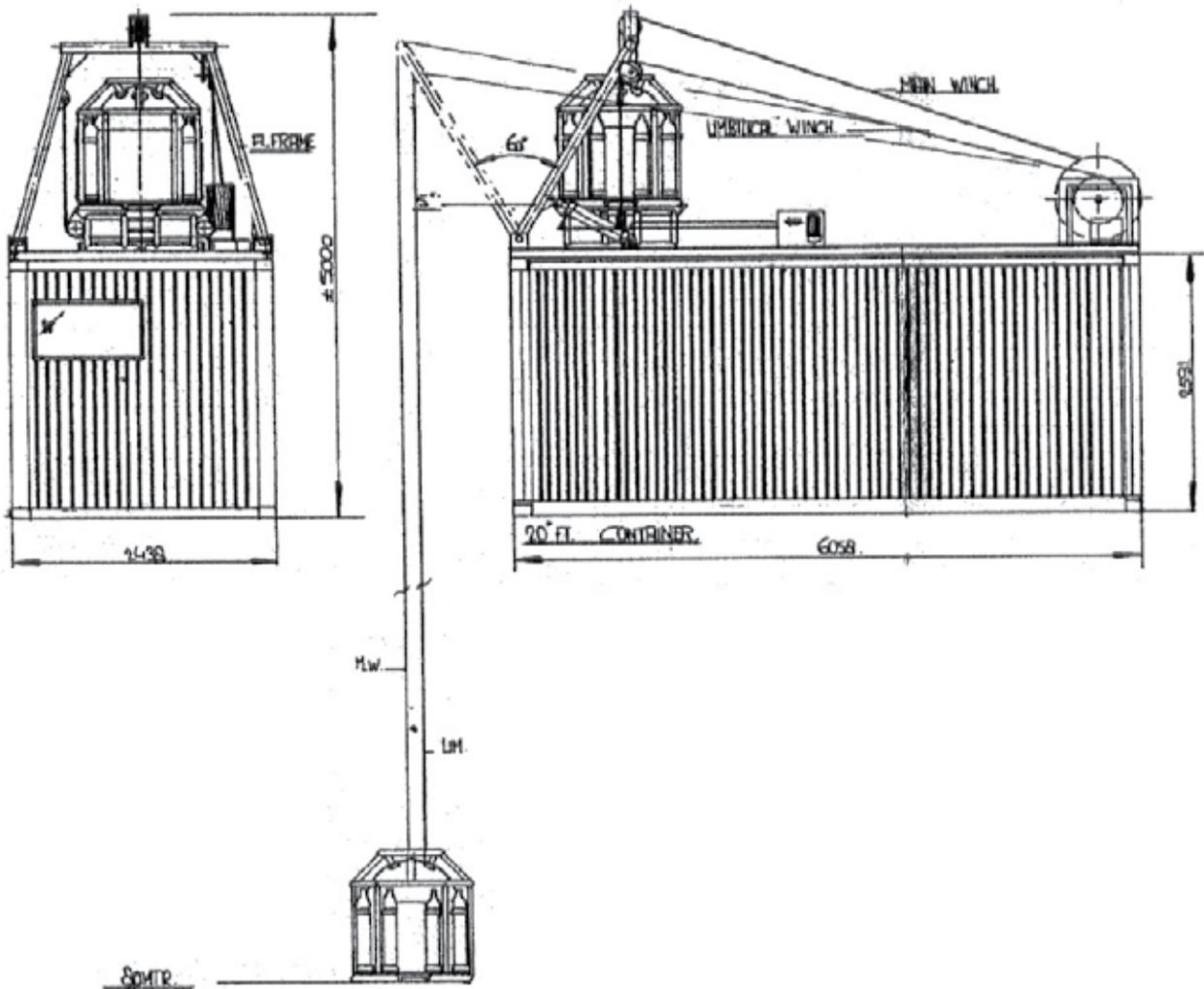
With an open space surface of over 112 m<sup>2</sup> and a weight bearing up to 30 tons, it will be the centre of operations and will carry all major equipment and media. Its placement will be assured by 4 moorings with 800kg each and a 2 cm thick line... over 1km of line will be needed!

## DIVING BELL

The barge will be equipped with an "Open Bell" provided by "Palumbarus", a company from Palermo (technical partner and exhibitor of the DDE exhibition). The Bell will be the habitat for most of the extremely heavy decompressions that all divers will have to do.

This is essentially a stable and heavy (about 2 tons) "reversed glass" about 2 meters high, containing an air bubble that reaches its lower bord (thus not allowing any water to enter).

It will be moved to the required depth (see image) and will allow divers to enter a dry environment, where they will be sitting during the long decompression. The Bell is provided with electric light, a telephone for communication with the surface and a hot-water system for the suits of the divers in order to warm up.



## **HYPERBARIC CHAMBER AND MEDICAL ASSISTANCE**

On the same barge there will be a multiplace hyperbaric chamber, owned by the company "Palumbarus" of Palermo (technical partner and exhibitor of the DDE exhibition), which will allow the immediate treatment of any eventual disbaric problem.

The health aspect will be supported by the Verbania CRI, CRV, 118 and Order of Malta Italian Corp for the general appearance and first aid (organized with doctors, nurses and facilities on the barge and around it, like hydroambulances, waterscooters, etc.), and by Dr. Luca Torcello (Responsible of the hyperbaric chamber in Zingonia - BG) in charge of the medical-hyperbaric section.

## **OTHER ASSISTANCE**

Around the barge will be placed all care and control facilities including the equipped motor barge of "Sub Verbania" (see image),



main technical partner of the event. Several ribs, boats, helicopter, hydroplane personnel and equipment, will also be present as support for a number of purposes.

## **WHO ARE THE EXTREME DIVERS**

The deepest divers will basically be 4 among the most famous in the world and holders of the biggest events: Alessandro Scuotto, Cedric Verdier, Mario Marconi, Pim Van Der Horst.

## **BREATHING SYSTEMS OF THE DEEP DIVERS**

All deep divers (bottom and assistance) are equipped with fully closed multi-mix rebreathers (C.C.R. Rebreathers - see image).



## **DESCENT**

The descent line will be vertical very close to the barge.

The absence of currents will allow divers to reach the bottom within 8 minutes.

The bottom time will be limited to 2 minutes only due to the extremely long decompression that divers will have to face.

The arrival and departure points on the bottom will be identified by the powerful lights of the ROV from the VV.F., which will also allow the tracking of the divers from the surface in real time, from the moment they'll arrive till the moment they will leave the bottom.

This will also allow a perfect synchronization of the assistance divers.

## **DECOMPRESSION**

The off-gassing starting depth will be around 170 meters and the following decompression stops, thus extremely short, will be executed along the line, allowing the divers to follow a very dynamic profile. The first stop lasting 1 entire minute will be around 110/105 meters depth.

When the stops will start becoming static and the cold will start to be felt (around -40 meters and after about 75 minutes) the extreme divers will leave the descent line to move towards a parallel one connected with the decompression bell.

They will enter it, abandoning the closed circuit rebreather outside, and start breathing with OC (open circuit) through regulators connected with tanks of 40 liters capacity and 200 bar pressure, positioned around the bell. With the intercom they will give the necessary instructions to the surface on the needed movements of the bell, depending on the planned decompression times and eventual signs/



symptoms of DCS (Decompression Sickness).  
At -12 meters depth they will swap to Pure Oxygen, thanks to the higher tolerance given by the dry environment.

Exit from the water will happen after about 7/8 hours.

### **DIVING SUPPORT**

From -150 meters depth until the surface the deep divers will be assisted by a highly skilled team, trained not only about depth but also about the special breathing systems in use (Multimix CCR Rebreathers, used also by the divers of the assistance team).

During the last 40 meters of ascent, potentially the most problematic, the assistants will also have the possibility to enter the bell to bring liquids, integrators and eventually any needed medicine to the decompressing divers. And, why not, even to make a few minute's company to divers!

### **IMAGES**

During the descent and the exploration, a video will be guaranteed by 2 Sony HD cameras with special Nimar housings and by another 2 Sony HD cameras with special EasyDive housings, in the hands of the deep divers.

Starting from the -80 meters authorized underwater videographers will be able to record the divers and even enter the bell, in order to catch the first impressions of the divers directly from their voice while still underwater!

### **INTERNET**

On one of the Organization's boat will be prepared a small room for the quick editing of the interviews and images captured from 2 DDE operators that will be moving around on the entire field of the exhibition. The "short" movies will than be placed on a selected area of the DDE website using the well known YouTube platform.

In short, this service will allow the images to be online with a delay of only about half an hour!

### **SCHEDULE OF THE "DDE MILANO MISSION"**

Initial operations will begin on Tuesday the 6th of. Numerous tests will be conducted on Wednesday the 7th and Thursday the 8th of May.

The day of the dive is Friday the 9th of May and will include dawn wake, control of the personal equipment; transfer to the water field and the dive at the early morning.

Deadline is expected to be late in the afternoon, with the final transfer of personnel and equipment to the base-field DDE in Maccagno.

### **BE ON THE SPOT? ABSOLUTELY!**

DDE is considering, in conjunction with "Navigation Lake Maggiore" which has already given its availability, the technical feasibility of a free public transport to the dive-spot, so that each one will physically be able to assist in real-time to the event and just a few meters.

DDE will communicate any development and details on its website [www.ddexhibition.org](http://www.ddexhibition.org)

### **SCIENTIFIC RESEARCH**

The final Protocol of medical and scientific examinations is under process.

DDE will communicate it on its website [www.ddexhibition.org](http://www.ddexhibition.org)

### **COMMEMORATION**

Modality, time and location are going to be defined.

DDE will communicate it on its website [www.ddexhibition.org](http://www.ddexhibition.org)

### **DDE, THE NEW INCREDIBLE DIVING EXHIBITION!**

The exploration of the "Milano" is part of the activities of DDE, Dynamic Dive Exhibition, the new "concept" and instrument exhibition of the diving industry.

Thanks to this concept both the exhibitors and the visitors can operate directly in-water, in real conditions (natural basin), within wide borders (from 0 to 100 meters), and in extremely safe conditions (care facilities, on-site emergency support).

It's a new format through which the visitor interacts with the fair itself and its components, testing equipment in a variety of conditions, participating in demonstrations, exercises, training, updates, meetings, conferences, etc...

In a dynamic, unlimited and free way.

### **THE FESTIVAL: INFORMATION, UPDATES, FACILITIES**

DDE is a true "International Diving Festival", and takes place in Maccagno (VA, Italy) from the 9th to the 11th of May 2008.

Everything on:

[www.ddexhibition.org](http://www.ddexhibition.org)

