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# Volume 6 Number 18 – Wednesday, 30 April 2014

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# Introduction to the Republic of Colombia, Armour and Ballistic Protection Industry



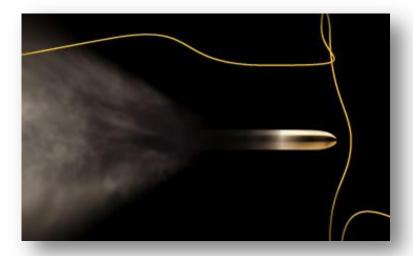


The growing worldwide need for personal security nowadays, has led to an increased demand for ballistic protection. Several Colombian companies have appropriate capabilities, experience and references, allowing them to lead developments in the armour and ballistic protection industrial domain. Today, the related Colombian industry is developing/manufacturing a wide range of ballistic protection products, from helmets, shields and body

armour, to ballistic protection for vehicles (cars, vans and trucks, both military and civilian), aircraft/helicopters, trains and even ships/vessels.

The world market for ballistic protection and in general force protection products is rather flourishing. It is indicative that according to a survey conducted by Frost and Sullivan, the global market for force protection is estimated to amount to some \$ 70.85 billion during the period 2012 – 2021. One of the principal reasons for this is that Improvised Explosive Devices (IEDs) are considered a major threat for armed forces around the world. Further, this threat affects equally Vehicles, Soldiers and Bases.

Of this market, base/military installations protection is expected to constitute the largest portion, with related revenues totalling up to \$33.61 bln over the period 2012 - 2021, while on the other side, the global soldier protection and vehicle protection segments are estimated to amount to \$15.53 bln and \$21.71 bln respectively, for the same period.



During the process of mapping the Aerospace, Defence and High Technology (ADHT) capabilities of the Colombian industry, Epicos identified (15) companies with expertise in terms of developing Ballistic Protection products and services, representing some 1.2% of the 1287 capabilities mapped in total, corresponding to the 500 companies considered. In following these 15 companies are listed in alphabetical order:

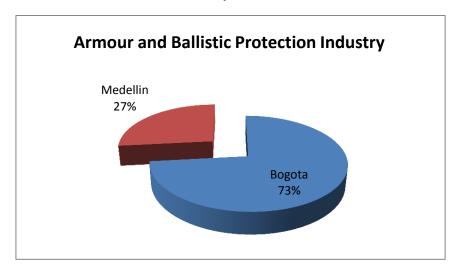
- 1. AGP DE COLOMBIA S.A.
- 2. ARMOR INTERNATIONAL S.A.
- 3. BALLISTIC TECHNOLOGY S.A.
- 4. BLINDAJES ISBI LTDA

- 5. BLINDEX S.A.
- 6. CASHERY
- 7. CENTIGON COLOMBIA
- 8. CORPORACIÓN DE LA INDUSTRIA AERONÁUTICA COLOMBIANA S.A. -CIAC
- 9. GLASSEK S.A.

- 10. INDUCASCOS
- 11. INDUSTRIAS MULTICONFORT S.A.S.
- 12. ITALTECNO SEGURIDAD LTDA.
- 13. MIGUEL CABALLERO
- 14. MINE-PRO S.A.S.
- 15. TECNOLOGIAS MARTE S.A.S

Of these 15 Armour and Ballistic Protection companies, eleven (11) are located in Bogota and four (4) in Medellin.

Figure 1: Armour and Ballistic Protection Industry



As was already mentioned in previous, the Colombian industry has demonstrated the existence of substantial capabilities in order to play a leading role in the global Armour and Ballistic Protection Industry. It is indicative for example that the company MIGUEL CABALLERO, exports some 85% of their annual production. This Colombian company sells ballistic protection products to 64 different countries around the world, through its 21 official distributors and corporate offices, strategically located in Central America, South America, the United States, Africa, Asia and Europe.

Further, Colombian Armour and Ballistic Protection companies are constantly investing in developing new and innovative materials and solutions that result in better products for their customers and distributors. Resulting from such an innovation-driven spirit, Armor International S.A. continues its expansion into new markets and regions, building on its cutting edge technology, highly trained professionals and ongoing R&D, aimed at developing ever lighter composite materials.

It is worth mentioning that Colombian companies in this field serve a wide range of customers. For example, the main customers of BLINDAJES ISBI LTDA. are military forces. Nevertheless, the company also supplies armoured vehicles to civilian customers. Further, in Venezuela BLINDAJES ISBI LTDA. has as customers other armouring companies that buy their bullet proof glass.

Finally, it is also worth noting the cooperation Colombian companies from this sector have with several governmental entities with respect to developing new and innovative products in this area. For example, CASHERY has performed field scientific tests for anti-mine

products with the support of the Escuela de Ingenieros Militares del Ejército Nacional de Colombia (School of Military Engineers of the National Army of Colombia), the Hospital Militar Central - Dirección de Cirugía Vascular y Angiología (Central Military Hospital – Directorate of Vascular Surgery and Angiology) and the Colombian Air Force. After the end of each destructive test, the Hospital Militar issued a report and their respective recommendations were taken into account in the process of ameliorating the corresponding product.

In following, four (4) interviews from a selection of Colombian Armour and Ballistic Protection companies can be found. These interviews offer insight to only a small sample of the wide ranging capabilities of the Colombian companies, active in the Armour and Ballistic Protection Industry.

Interview with Mrs. Angela Rocio Jimenez, International Commercial Coordinator of the company MIGUEL CABALLERO





Mrs. Angela Rocio Jimenez, International Commercial Coordinator of the company MIGUEL CABALLERO, gave an exclusive interview to Epicos, regarding the position of the company in the international and national markets. Among others she stated that: "We sell our products to 64 different countries around the world, through our 21 official distributors and corporate offices, strategically located in Central America, South America, the United States, Africa, Asia and Europe. In those markets we play an important role

as far as offering personal protection products to anyone who could be exposed to 'risky' situations/environments, such as people from the police/military forces, private security companies, VIPs and more".

# 1. Could you please describe the current position of MIGUEL CABALLERO in the national and international markets?

MIGUEL CABALLERO can be fairly characterised as an international company due to the fact that 85% of our sales are outside Colombia. We sell our product in 64 different countries around the world through our 21 official distributors and corporate offices strategically located in Central America, South America, the United States, Africa, Asia and Europe. In those markets we play an important roll offering personal protection products to anyone who could be exposed to risky situations such as police/military forces, private security companies, VIPs and more.

#### 2. Could you please briefly describe the history of the company?

1992 - The company was founded in Colombia in response to addressing the needs in the field of personal protection.

1993 - MIGUEL CABALLERO participated for the first time at the footwear and leather exhibition in Bogotá.

1994 - The company invested in



researching new materials and designs in response to the growing market demand.

1996 - MIGUEL CABALLERO participated to public tenders and won due to the fact that in the meantime the company had accomplished compliance of its products to the related US National Institute of Justice (N.I.J.) standards.

1998 - Bidding of MIGUEL CABALLERO in tenders worldwide.

- 2001 MIGUEL CABALLERO obtained its first certification of compliance to N.I.J. standards.
- 2002 Strategic partnerships with leading companies in the field of personal safety were established.
- 2004 The Discovery and History Channels made documentaries about the company.
- 2006 Opened the first boutique specializing in armoured garments in the city of Mexico.
- 2008 MIGUEL CABALLERO sold products to Russia and the Middle East.
- 2010 A Research and Development department was created.
- 2011 Received personal protection certification in compliance with European Union standards.
- 2013 Certified three further products to the N.I.J. standard. As a result, the company reached a total of five different products, all certified to N.I.J. standards.
- 2014 The company started direct operations in Guatemala.

# 3. Could you please name the main customers of MIGUEL CABALLERO?

We've identify 5 different market segments, covering the entirety of the market, which we serve currently. We have the "VIP" category with bulletproof clothing oriented to Presidents, CEO's, royalty and anyone that has an important social status (for example the actor Steven Segal and the former President of Colombia, Alvaro Uribe Velez).

Then we have the "Law, enforcement and military" category in which we develop special and functional products for public entities.

"Private Security" is another category targeting companies that are responsible for the safeguarding of peoples' lives and valued possessions.

A further category concerns the products designed to protect people when using a motorbike, as part of their job or just for leisure/transportation purposes.



The final category is that of "Special projects" where the related division develops special designs for the ballistic protection of helicopters, boats and buildings.

### 4. Could you please describe the main services and products that the company provides?

We develop and produce several products. Bulletproof clothing and armoured vests are the principal ones. We also produce shields, helmets, riot suits and more. We further offer related training services to our customers.

# 5. Is the company currently investing in a new technology?

We always invest in new technology because this is one of the most important added-value parameters in our product design. We have developed and adapted many technologies such as thermoregulatory materials and special nanotechnology fabrics for example.

# 6. What are the next steps and priorities of MIGUEL CABALLERO?

Our primary goal is to become the leader in Latin America for the related markets, by the year 2020.

7. Is there a specific country or region MIGUEL CABALLERO is planning to expand to in the near future?

Currently we have plans for expanding into different countries and we are meticulously preparing our next steps so as to accomplish these plans in the best possible way.

Interview with Mr. Alberto Mejía A., Marketing Director of the company Armor International S.A.





Mr. Alberto Mejía A., International Marketing Director of the company Armor International S.A., gave an exclusive interview to Epicos, regarding the position of the company in the international and national markets. Among others he stated that: "Meeting the highest international armouring standards (EN, DIN, NIJ, UL and ISO 9001:2008), the company armours all types of vehicles including

automobiles, SUVs, helicopters, aircraft, locomotives/trains and boats and has also developed a specific know-how in architectural armouring. Last but not least, we offer a variety of armoured vests and accessories".

# 1. Could you please describe the current position of Armor International S.A. in the national and international markets?

Armor International S.A. has been ranking first among the armouring operators worldwide for almost 35 years. Established in Bogota, Colombia, the company is not only recognized nationally, but also internationally, in regions such as Europe, Asia, the Middle East, Africa, the Caribbean, Latin America, and so on. Thanks to the excellence of its production processes and services, Armor International S.A. is outrivaling many competitors. Cutting edge technology, highly trained professionals and ongoing R&D aimed at developing lighter composites, assure that Armor International S.A is a major player in the related industry. The company's worldwide network of distributors and its growing export sales secure the unmatched international leadership position of the company. Meeting the highest international armouring standards (EN, DIN, NIJ, UL and ISO 9001:2008), the company armours all types of vehicles including automobiles, SUVs, helicopters, aircraft, locomotives/ trains and boats, and has also developed a specific know-how in architectural armouring. Last but not least, we offer a variety of armoured vests and accessories. Armor International S.A. is constantly working to save lives!

#### 2. Could you please briefly describe the history of the company?

With an experience of more than 30 years, Armor International S.A. has positioned itself in the front line of the armour business in Colombia and the world. It is internationally recognized in the armour industry for its conscientious work and its high level of integration both in terms of processes and



3D-Shield is a completely new concept in armour, light armour that provides greater coverage with its three-dimensional design

product lines. The company pays special attention to the constant innovation in terms of materials and solutions that result in better products for its customers and distributors. Thanks to the development of its own patents, Armor International S.A. projects itself as one of the companies with great knowledge in armour developments and continues its expansion into new markets.

Well renowned vehicle brands rely on the prestige and the quality of Armor International S.A. to install the armour for their automobiles. In the same way, high government officials from different countries have placed their confidence in Armor International S.A. products to protect their lives.

#### 3. Could you please name the main customers of Armor International S.A.?

Our customer base is as wide as one can imagine. We serve military forces, governmental institutions, banks, armoured transportation and secure logistics companies, medical transportation organisations and finally VIPs and individuals looking for advanced levels of security and protection. One of our latest customers is the government of Surinam as Armor International S.A. sold to this Latin American country a Hunter APC-TR-12 MRAP vehicle.

#### 4. Could you please describe the main services and products that the company provides?

- ✓ <u>Designers Armour:</u> Personal protection, vests, garments and briefcases. These products can be customized to the customer's comfort and protection needs, optimizing weight and reducing the effects of the shot.
- ✓ <u>Clear View Armour:</u> A specialized section in the production of armoured glass, using top technology for every type of application.
- ✓ <u>Armour Panels:</u> A specialized section that processes materials and composites, to manufacture ballistic panels and armour fitting devices.
- Armour Kits: A specialized section tasked with putting together the right components for all type of vehicles, boats and aircraft.



Since 1981 Armor International has conducted various types of safety perimeter, repair and maintenance of trains and locomotives armouring.

- ✓ <u>Containers Armour:</u> A division that manufactures armoured containers and portable military bases.
- ✓ Rolling Armour: A specialized section in the production of armoured wheels and "Runflats", which allows overcoming flat tires in an emergency situation.
- ✓ <u>Architectural Armour:</u> Maximum protection for buildings, shop-fronts and banks, including against multiple shots and forced entry. The department offers the best window protection against forced entry and unarmed thefts.
- ✓ <u>Locomotive Armour:</u> Designed for locomotives and railroad vehicles. Highly resistant to repetitive shots and long-lasting in extreme climates.
- ✓ <u>Cash-in Transit Armour:</u> A specialized division dedicated to the armouring of high security trucks facilitating the transportation of valuables.
- ✓ <u>3D-Shield:</u> An advanced three-dimensional armour that is tailored to the vehicle shape, providing higher coverage with lower weight.
- ✓ <u>Aviation Armour:</u> Light and slim armour for helicopters and aircraft. It is resistant to powerful bullets and fire. It is also interchangeable between units.

- Marine Armour: Specialized in the armouring of boats and watercraft, with highly resistant materials with respect to water, corrosion and UV rays.
- ✓ <u>Defence Armour</u>: A specialized division dedicated to the design and production of tactical vehicles, military transport and personnel carriers.
- ✓ <u>Armour Projects:</u> Precise and efficient development of specialised projects such as for limousines, ambulances, tactical vehicles and special armouring.



The armoured vests and garments of the company meet the highest quality and resistance standards

- ✓ <u>Ambulance Armour:</u> The safest way to move patients in high risk situations. Armoured ambulances and medical units provide security during medical emergencies/transportation.
- ✓ <u>Top Level Armour:</u> Designed for highly endangered people with protection needs against rifles and rifle ammunition.
- ✓ <u>Automotive Armour:</u> Combines experience, innovation and quality in automotive armouring, for maximum flexibility, originality and ballistic resistance.
- ✓ <u>Patrol Armour:</u> Designed specifically for law-enforcement officers and with high endurance in mind.
- ✓ <u>Armour Accessories:</u> A specialized section for the design and production of accessories that provide comfort and prevent the immobilization of a given vehicle during an attack.

## 5. Is the company currently investing in a new technology?

The company is always researching and investing the necessary human and financial resources in order to keep itself ahead of the competition. In the armouring business, the aspect of weight is a constant consideration that needs to be addressed and R&D is vital to this end. 3D-Shield is the best example of a completely new concept: a three-dimensional light weight design, ideal for common or specialized vehicle armouring. Made of formed parts, it fits the most complex curvy inner walls of the car body. Avoiding unnecessary cutting and welding, this revolutionary process assures the vehicle keeps its original appearance without adding extra and heavy welded parts. The result is a completely bullet proof vehicle, with a reasonable weight addition and an excellent thermal and acoustic protection. In Armor International S.A., we use the latest technologies to meet the highest armouring standards.

#### 6. What are the next steps and priorities of Armor International S.A.?

Our top priorities will always be our customers' satisfaction and market development. We are constantly looking at improving our product line and to expand our customer database. Both our marketing and commercial departments endlessly work to find new markets and new opportunities. Armor International S.A. is approaching emerging markets but is also strengthening its position in the national market where our customers' satisfaction remains at high levels.

7. Is there a specific country or region Armor International S.A. is planning to expand to in the near future?

There is no specific country or region Armor International S.A. is planning to expand to, but we are always open to new opportunities worldwide. We have initiated contacts in many regions of Asia and the Middle East, Africa, the Americas, and we also believe Europe is a market we should expand to in the years to come.

Interview with Mr. John Murphy, Managing Director - International Sales of the company BLINDAJES ISBILLIDA.





Mr. John Murphy, Managing Director - International Sales of BLINDAJES ISBI LTDA. gave an exclusive interview to Epicos, regarding the position of the company in the international and national markets. Among others he stated that: "Military forces are the main customers of our vehicles. Nevertheless, we also supply vehicles to civilian customers. Finally, it is worth mentioning that in

Venezuela our customers are other armouring companies that buy our bullet-proof glass".

1. Could you please describe the current position of BLINDAJES ISBI in the national and international markets?

We currently sell our products to Colombia, Nigeria, and Venezuela and we are constantly trying to open up new markets.

2. Could you please briefly describe the history of the company?

Since 1993, we have been manufacturing the highest quality armouring systems for vehicles, helicopters, shields, military personnel carriers, bomb disposal trailers, and turrets. Ten years ago we expanded into the military market selling APCs (Armoured Personnel Carriers) to all the branches of the Colombian Military. We also sold 17 water cannon trucks to the Colombian Police. These vehicles were built on commercial chassis of companies such as Kenworth, International and Kodiak.

All our vehicles are of the best quality and have been combat tested.

Could you please name the main customers of BLINDAJES ISBI?

Military forces are the main customers of our vehicles. Nevertheless, we also supply vehicles to civilian customers. Finally, it is worth mentioning that in Venezuela our customers are other armouring companies that buy our bullet-proof glass.

4. Could you please describe the main services and products that the company provides?



We mainly provide to our customers with civilian or military armoured vehicles. Our vehicles are 100% effective and capable of protecting their passengers from numerous rifle and IEDs

(Improvised Explosive Devices) attacks. We also sell ceramic armour (silicon Carbide) and ballistic (bullet-proof) glass to other armouring companies.

# 5. Is the company currently investing in a new technology?

Recently we have developed IIIA glass that weighs only 32 kilos per sq. meter. Also, we have recently offered to other companies really light opaque solutions, using silicon carbide tiles.











# 6. What are the next steps and priorities of BLINDAJES ISBI?

One of the next steps we are planning to take is to supply ceramic armour to Mexican armouring companies.

7. Is there a specific country or region BLINDAJES ISBI is planning to expand to in the near future?

Venezuela is one of our next target markets. Due to the geographical proximity and the demand they have for high quality ballistic glass, this makes this particular country an attractive destination for our products.

# Interview with Mr. Heriberto Castro Pulido, General Manager of the company CASHERY





Mr. Heriberto Castro Pulido, General Manager of the company CASHERY, gave an exclusive interview to Epicos, regarding the position of the company in the international and national markets. Among others he stated that: "Currently we are strongly positioned through our strategic ally HOUDING in Colombia (headquarters), the United States and

Brazil and we are soon planning to expand to Chile. As a second step, we would like to expand the promotion, dissemination and delivery of our products and services to Europe and Africa".

#### 1. What is the CASHERY Mission?

Our Mission is focused on researching, developing, innovating, producing and distributing products of excellent quality. Our products are in developed in accordance with international standards and protect our customers from the Defence and Industrial sectors.

### 2. Could you make a historical review of CASHERY?

CASHERY was founded on April 25<sup>th</sup>, 1995. The personnel of CASHERY use their professional and academic experience to investigate, innovate and develop new products for the Defence and Industrial sectors. Initially, we focused on producing leather boots, without steel toe cap, for plant manufacturing, as well as dielectric and military boots. All our products combine comfort and safety.

In 2003, we expanded our range of products and we started developing products for personal protection. Today, we offer a wide variety of products such as mine boots, mine protectors, Genital Vascular mine Protectors, anti-mine suits, bullet proof and anti-explosive material used in helicopters, planes, tanks, ships and boats. Also we have developed a self-sealing material used in the manufacture of fuel tanks, preventing fuel leaks when the fuel tanks are struck with short or long-range bullets. Additionally, this material could be used to prevent the sinking of a sea vessel when this is hit by a bullet.



# 3. Can you describe the scientific processes used to verify the security and efficiency of CASHERY's products?

In 2003, we started the process of testing our products by designing prototypes for destructive testing with explosives, pentolita or C-4, with and without shrapnel (metal parts) and with short and long-range fire guns.

With the support of the Escuela de Ingenieros Militares del Ejército Nacional de Colombia (School of Military Engineers of the National Army of Colombia), Hospital Militar Central - Dirección de Cirugía Vascular y Angiología (Central Military Hospital – Directorate of Vascular Surgery and Angiology) and the Colombian Air Force, the scientific field tests for anti-mine

products were performed according to established protocols and tested with real human parts. These tests were carried out by using the trial and error method. After the end of each destructive test, the Hospital Militar issued a report and their respective recommendations were taken into account in the process of ameliorating the corresponding product.

We used our shielding materials in several tests. The results obtained showcased that our anti-mine products can dissipate and cushion the impact energy, the kinetic energy and the explosive wave, minimizing the damage on the soft tissue, bones, vascular and genital systems.

We further conducted field tests for our innovative self-sealing material with the support of the Colombian Air Force, in a city with relatively high humidity and atmospheric pressure,

with over 43 °C temperature, using a long-range rifle (with 7.65mm and 12.7mm ammunition). The result of the tests was that the sample was perforated but the self-sealing material immediately recovered to inhibit the entry and/or exit of fluids to/from the sample. This self-sealing material is further resistant to hydrocarbons; hence it can be used for the manufacture of fuel tanks for several means of transportation.

Additionally, CASHERY has developed a further innovative shielding material which aims to increase the level of protection against long-range rifle fire. This material does not lose its mechanical properties when exposed to moisture and/or high temperatures and further is resistant to hydrocarbons and/or stabbing by sharp weapons. Furthermore it minimizes the escape of gases and does not allow the transfer of shrapnel, acids, fuel and dirt.

#### 4. Are your products patented?

The majority of our products are intellectually protected. Only one of them is not patented yet, but we are currently in the process of patenting it.



Our immediate plans are to promote and strengthen the provision of CASHERY products and services at the national level and specifically to entities of the Government, such as the Ministry of Defence and the Colombian Police.

Also, through our strategic collaboration with HOUDING, we hope to expand the visibility/reach of our products and services and of the capabilities of our strategic allies, the members of the Asociación Colombiana de Industrias para el Mercado Defensa y Aeroespacial (ACIMDA – Colombian Association of the Industries for the Aerospace and Defence Markets) of which CASHERY is an active member.

Further, as a result of the recent cooperation with HOUDING, the company plans to promote and provide the following specialised services to its customers:

• Consulting services such as project management for the defence sector, Offset Project Formulation, Contracts Monitoring Service and technical translations.



- Engineering Services such as Computer Aided Design (CAD), Failure Analysis, Computational Fluid Design (CFD)/aerodynamics analysis, and avionics and cabins modernization.
- Aeronautical Engineering Services such as Modernization of Aircraft, Maintenance Programming and modular support, Spares supply and Satellite Systems.
- Installations/Removal Services such as hardware removal and component installations.

#### 6. Is the company currently investing in new technology?

Yes, our company is constantly investing in new technologies. We typically improve our products, by developing new and innovative materials through R&D projects conducted within the Republic of Colombia.

#### 7. What are CASHERY's next steps and priorities?

For the next 5 years, CASHERY has as its primary objective the promotion of our products and services through the following channels:

- Developing Public-Private Partnerships with the Ministry of Defence.
- Promoting and strengthening the supply of CASHERY products and services for National Government entities, such as the National Army of Colombia, the Ministry of Defence and the Colombian Police.
- Increase the number of members and the capabilities of the participating entities of the Asociación Colombiana de Industrias para el Mercado Defensa y Aeroespacial (ACIMDA).
- Participate in International Fairs (such as FIDAE in Chile) in order to promote our services and products.
- Build strategic alliances with companies worldwide to strengthen the presence of our products and services in markets and regions that we have not yet reached.

# 8. Is there a specific country or region where CASHERY plans to expand to in the near future?

Currently we are strongly represented through our strategic ally HOUDING in Colombia (headquarters), the United States and Brazil and we are soon planning to expand to Chile.

As a second step, we would like to expand the promotion, dissemination and delivery of our products and services to Europe and Africa.



# **Epicos Newsroom**



Apart from the section focused on Republic of Colombia, Armour and Ballistic Protection Industry, EPICOS' newsletter also provides a section with top international news supplied by worldwide acknowledged news' providers. Through this section EPICOS announces the latest industrial developments for a large variety of high technology industries in the form of articles, videos, press-releases, electronic newspapers, etc.

#### India test-fires anti-ballistic missile

India successfully test-fired a new anti-ballistic missile on Sunday in a step towards developing a missile defence system which only an elite club of countries has built.

India, which shares borders with arch-rival Pakistan and giant China, both of whom are nuclear-armed, is developing the system that aims to shield it against a ballistic missile attack.

The test was conducted off the east coast on Sunday morning, the Defence Research and Development Organisation (DRDO) told the Press Trust of India news agency.

"The trial was conducted successfully and all the mission objectives were met," said DRDO spokesman Ravi Kumar Gupta.

The missile, which was tested at Wheeler Island off the coast of Orissa, is capable of intercepting targets outside the earth's atmosphere.

India has a double-layered ballistic missile defence programme which can destroy missiles at higher as well as lower altitudes.

Only a small number of countries including the United States and Russia have anti-ballistic missile systems.

India, the world's second-most populous country, has been stepping up efforts to position itself as a strong regional power in Asia.

The nuclear-armed country has fought three wars with Pakistan and one war with China.

**Source:** 2014 AFP, Agence France-Presse (AFP)

### Saab fighter jet deal up in air ahead of Swiss vote

A decade of negotiations and evaluations could come to nothing next month if Switzerland votes down a multi-billion deal to buy fighter jets from Sweden.

Bern began seeking replacements for its 54 F-5 Tiger jets ten years ago, inviting Saab in 2008 to join the bidding war against French firm Dassault's Rafale and the Eurofighter Typhoon.

The Swedish maker's Gripen won the race in 2011, securing a 3.1-billion Swiss-franc (2.5-billion-euro, \$3.5-billion) deal for 22 aircraft.

But the deal could yet fall apart when it is put to a popular vote on May 18, as latest opinion polls show that 52 percent of voters plan to shoot it down.

Some critics argue that the country has no need of new fighter jets, others are unconvinced by the quality of the Gripen, while yet others say that the jets could end up costing Switzerland far more than it bargained for.

But the pro-Gripen lobby argue that a modern airfleet is crucial for Switzerland's defence.

"An army without an airforce is like a house without a roof," the group said.

"We have to defend our neutrality. Therefore, we also have to have an airforce and we need modern airplanes," said the pro-Gripen lobby's deputy campaign chief Sven Bradke, firm in the belief that public opinion would swing his way.

- 'Switzerland has enough fighters' -

But others argue that the country already has enough wings for its aerial defence.

"Switzerland has enough fighter jets," said Swiss Green Party parliamentarian Christian van Singer.

Besides the F5 Tigers, the country has 32 F/A-18s that were upgraded in 2010, at considerable expense.

"The F/A-18's are excellent, powerful planes, and there are enough of them for the task at hand: policing the skies," said Socialist parliamentarian Pierre-Alain Fridez.

But Gripen supporters cited a situation in January, when the airforce struggled to provide cover simultaneously for a meeting on Syria near Geneva and for the World Economic Forum taking place at the other end of Switzerland -- Davos.

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"We were lucky that time because it was good weather and we could fly the old Tiger airplanes," Bradke said, adding that the jets -- void of sensors -- could not fly at night or when it is overcast.

Others say the issue is not a shortage of planes but of pilots.

Opponents, who cannot nix the deal but who can block the funding needed to buy the planes, also say the purchase would be far costlier than the official price tag indicates.

If the training of pilots, maintenance and upgrades over the expected 30-year life-span of the planes, fuel and new armament, were to be taken into account, the Swedish fighters will actually end up costing around 10 billion francs, they say.

That is a very high price to pay "to let the military buy its new toys," said Amanda Gavilanes, of the pacifist GSsA group.

- 'An excellent flier' -

Bradke however questioned the critics' sums and said Saab is obliged to give Swiss firms contracts worth 2.5 billion francs over the next decade in exchange for the deal.

"That amounts to 10,000 people in work for one year, or 1,000 for 10 years... That's a lot," he said.

Saab is keeping a low profile ahead of the vote, after its decision to contribute financially to the "yes" campaign led to a backlash in public opinion earlier this year.

It opted to quickly withdraw its contribution, and Richard Smith, who leads Saab's campaign in Switzerland, voiced optimism the Swiss would accept the deal.

"Every customer is important so of course we hope the referendum is a 'yes'," said Smith.

Source: 2014 AFP, Agence France-Presse (AFP)

#### MENA military spending to reach \$920 bn by 2020: study

Military spending between 2014 and 2020 in the Middle East and North Africa will total \$920 billion (662 billion euros), IHS Global Insight said in a forecast Tuesday.

The US-based consulting firm did not give an overall breakdown at the end of a forum it hosted in Dubai, but said \$27 billion will have been injected into the economies of the Arab nations of the Gulf by 2020 from defence deals via offsets.

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Offsets are agreements in which a supplier agrees to buy products from the party to whom it is selling, in order to win the buyer as a customer and offset the buyer's outlay.

Guy Anderson, senior principal analyst at IHS Jane's Aerospace, Defence and Security, said Saudi Arabia will gain most from its offset programme with \$12.6 billion to be added to the OPEC kingpin's economy from such deals by 2020.

He said the United Arab Emirates would be in second place, with \$12.2 billion added during the same time period.

Turning to the energy sector, IHS forecast that \$350 billion in investment will be needed by 2030 to meet the rapid demand for power in the MENA region.

Meanwhile, Farrah Boularas, senior researcher at IHS Energy, said investments in energy refining and related facilities in the six nations of the Gulf Cooperation Council are expected to exceed a cumulative \$80 billion through 2020.

"Between 2014 and 2020, IHS expects crude distillation and condensate-splitting capacity additions will increase regional output by around 1.5 million barrels per day," Boularas added.

Source: 2014 AFP, Agence France-Presse (AFP)

### Malaysia to lead probe into ill-fated MH70: minister

A former head of Malaysia's civil aviation department will lead an investigation into a missing jet that will also include members of the US National Transportation Safety Board and other agencies, authorities said Tuesday.

Hishammuddin Hussein, Malaysia's acting transport minister, said Kok Soo Chon would head the team probing the disappearance of Malaysia Airlines flight MH370 with 239 people on board.

"The main purpose of the international investigation team is to evaluate, investigate and determine the actual cause of the incident so similar incidents could be avoided in the future," he said in a statement.

"It is imperative for the government to form this independent team of investigators which is not only competent and transparent but also highly credible."

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The anguish of families, who have alleged Malaysia was hiding information, has repeatedly spilt over into angry protests against the government and airline since the Boeing 777 vanished on March 8 on a flight from Kuala Lumpur to Beijing.

Kok, who was also a former permanent representative to the Montreal-based International Civil Aviation Organisation, is expected to face a tricky task.

While family members are demanding information, investigators have no answers as to why the plane veered dramatically off course. Malaysia believes it was deliberately diverted but it is not known by whom.

Based on calculations involving the plane's speed and fuel and satellite data, investigators believe it crashed somewhere in the southern Indian Ocean west of Australia.

Asked about media reports citing an Australian firm's claim to have detected possible aircraft wreckage in the Bay of Bengal, Hishammuddin said the international search team was verifying the information.

"Need more corroboration n verification b4 we deploy assets," he said later on his Twitter account.

Malaysian media quoted Adelaide-based GeoResonance, a marine exploration company, as saying it has detected possible wreckage 5,000 km (3,125 miles) from the current search location.

The investigation body, which has already started work, has accredited representatives from the US National Transportation Safety Board, Britain's Air Accidents Investigation Branch and China's Aircraft Accident Investigation Department among other agencies.

Weeks of air and sea searching, including a deep-sea sonar scan by an unmanned minisubmarine, have found nothing.

Australia Monday announced an expanded search involving different technology across an area of about 56,000 square kilometres (22,400 sq miles).

**Source:** 2014 AFP, Agence France-Presse (AFP)

### Sanctions to target Russia's defense industry, others: US

The next round of US sanctions against Moscow over Ukraine will target Russia's defense industry as well as individuals and companies close to President Vladimir Putin, a senior US official said Sunday.

"Starting this week, in coordination with our allies and partners, we'll be exerting additional pressure on the people closest to him, the companies they control, the defense industry. All of this," deputy national security adviser Tony Blinken said on CNN's State of the Union.

In a separate interview with CBS's "Face the Nation," Blinken said high technology exports to the Russian defense industry would be affected.

President Barack Obama said earlier Sunday the sanctions being drawn up by G7 countries were a punishment for Moscow's "provocation" in eastern Ukraine.

"It is important for us to take further steps sending a message to Russia that these kinds of destabilizing activities taking place in Ukraine have to stop," Obama said in Kuala Lumpur.

Blinken, however, made clear that Washington would not meet Ukraine's demands for weapons despite menacing Russian military exercises on its borders.

"Here is the bottom line. We could send weapons to Ukraine. It wouldn't make a difference in terms of their ability to stand up to the Russians," he said.

Instead, he said Washington would focus economic aid to Kiev, with an estimated \$37 billion being rounded up by Washington, the IMF, World Bank and others.

"We need to be deliberate and do this in coordination with our partners," he said.

Republican lawmakers criticized the administration's approach as too little, too late, and called for sanctions that strike directly at the Russian economy.

"To me, hitting four of the largest banks there would send shock waves into the economy," said Bob Corker of Tennessee, the ranking Republican on the Senate Foreign Relations Committee.

"What I fear is all we're doing is tweaking folks," he said, adding that the sanctions targeting individuals were "not creating the kind of pain within Russia that will cause Putin to change," he said.

Source: 2014 AFP, Agence France-Presse (AFP)