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## FNSS General Manager & CEO Nail KURT Evaluates 2020 and Future Outlook

General Manager and CEO of FNSS Nail KURT recently talked with Turkey's major defense industry magazines during the live stream on FNSS's YouTube account. Defence Turkey's Managing Editor, Cem AKALIN, Executive Editor of MSI Magazine Ümit BAYRAKTAR, Editor in Chief of C4 Defence Özgür EKŞİ and Anadolu Agency's Reporter Gökşel YILDIRIM attended the live stream where Nail KURT answered some "burning questions" and he provided candid statements on the measures adopted by FNSS throughout the COVID-19 pandemic, the company's export activities and ongoing projects during this period.

Underlining that their company had adopted measures against COVID-19 pandemic quite early, KURT added that in particular, they took steps to increase communication by establishing a committee that involved contributions from certain departments to implement the precautions that need to be adopted. KURT continued, "FNSS faced the pandemic with early measures. We have been following the developments very closely since February,

and we have worked on increasing awareness about this pandemic. We placed special importance on communication and built a committee with valuable contributions from our unit related to healthcare and from our legal department. Our aim was to be able to make immediate decisions on the measures that had to be adopted. Since February, we have been doing the best that we can possibly do in this respect. We have adopted measures with the highest standards of hygiene. When the virus began to

spread in Turkey, stricter measures came up on our agenda. Foremost among these was our decision to request our employees to take their annual leave early; this usually takes place during summertime. We applied an earlier date for this and thought that we could prevent the spread of the pandemic by implementing it in March, at least in the company. So, in a way, we temporarily closed the company for three weeks. This has been quite advantageous for our employees and their families. As we

relaunched our activities, we thought of ways to keep our staff of 1,000 distant from each other in order to maintain social distancing. Throughout this maintenance period, we never had more than 100-150 staff on site at one time at the company. To prevent any delays in ongoing project deliveries, a part of our workforce, never exceeding 150 people, worked in the office.”

**FNSS General Manager and CEO Nail KURT: “On account of the measures we adopted, only two of our colleagues have been diagnosed with COVID-19 so far.”**

Affirming that teams continued to work in two shifts, KURT underlined that so far during this period, they have had only two employees test positive for COVID-19. KURT continued, “We made a plan to limit simultaneous operations, allowing a maximum of 400 employees on site at FNSS at any given time, until the end of May as part of our relaunch process. We have been successful by working in two shifts, grouped as the morning - afternoon and from the afternoon until the evening. Moreover, a considerable number of colleagues have started to work from home. We were able to achieve this with the help of the IT infrastructure we launched 3-4 years ago, and this subsequently



enabled 200 - 250 of our colleagues to work from home with safe working conditions. Nearly 100 employees from the remaining group were in the risk group, so we kindly asked them to remain at home. Additionally, we avoided physical gatherings as much as possible and took advantage of meeting applications such as Zoom or Microsoft Teams. We continue to practice all of these hygienic measures, such as those implemented in the cafeteria, and especially being aware of maintaining social distancing in personnel vehicles. We started off June with a slight change to our shift system; we will assess this new implementation in July and decide on a plan thereafter. Presently, our engineering department comes to work in the morning in a single shift. Therefore, a group of 500-550 employees can be at the office at any time of the day, while the previous method we practiced prior to June set a limit

at 400-450 employees. As a result of all these precautions, only two of our technicians have been diagnosed with COVID-19 so far. They are both in good health now and it was determined that the virus had contaminated these employees outside the premises. We quarantined about 40 of our colleagues who either were in the same personnel vehicle or worked together during the shifts with them. None of them caught the virus. For the time being, we are going through this pandemic with a total of two cases out of 1,000 people employed with the company. From July onward, we will carry out the existing measures with a slight update. We are also working on the psychological dimension of this pandemic as well. Our psychologists are providing attentive support to our colleagues. Therefore, we believe that we are doing almost everything that we can possibly do in a physical sense on behalf of FNSS during this period.”

**23 More Vehicles to be Delivered as Part of the Oman PARS-III Program**

Stating that FNSS has not experienced any delays in deliveries due to the pandemic, KURT added that there had been setbacks, however, in the schedules of certain projects because of their customers. “No FNSS-induced postponements have occurred in our ongoing deliveries. We place great importance on this issue. Deliveries of the Anti-Tank Vehicle program continue, we did not encounter any disruptions in this process. Moreover, we adopted certain measures to avoid any delays in the deliveries that will take place by the end of this year or within the next year. Regarding our urgent deliveries such as the Anti-Tank Vehicle program, we kept our workforce in the facilities and avoided any postponements. Then again, certain delays may

occur because of our customers; for instance, the delegation of Oman could not attend the acceptance test, and then the travel restrictions were launched. 2 to 3-month delays may occur, but they will be due to the acceptance process of the vehicles rather than the production process. Still, presently we are not experiencing a situation that would affect the completion of the deliveries in Oman. The acceptance period will be accomplished around September - October instead of June. The last 23 vehicles will be delivered before the end of the year. We have a final acceptance process remaining, and we will complete it towards the end of the year to the extent allowed by travel restrictions. Our deliveries to Malaysia have already been completed. A delay is expected due to the overall lockdown in Malaysia, yet there will be no postponements due to FNSS' deliveries to our local partners, DEFTECH company."

**General Manager and CEO of FNSS Nail KURT: "The impact of the COVID-19 pandemic will be felt in the next six months to one year."**

Nail KURT stated that a decline by 15% was expected in total turnover due to the delays in the processes of SPTWAV and ACV Modernization projects and he noted that though there was no decrease due to the virus, they might be

experiencing certain negative impacts in the upcoming period due to delays in fairs and events. "Although there is no decrease in the budget yet due to the potential delays in our production, there may be a decrease in our total sales within this year because of delays in expected or signed projects. There will be a decline of around 15% this year but pointing to COVID-19 as the actual reason would be wrong. We consider the delay in T+0, particularly in SPTWAV and ACV Modernization Projects, to be among the main factors. We will most likely observe the actual impact of COVID-19 in the upcoming period. The impact may appear in 6 months or a year as setbacks occur in terms of marketing and business development. Due to the travel restrictions, major fairs and events have been postponed. These events enable quite fruitful meetings with the end-users and customers. For instance, the exhibition in France (Eurosatory 2020) has been canceled. Then the fair in Malaysia (DSA) was put off until next year, the same happened in Indonesia as the Indo Defense exhibition was postponed. Therefore, we believe that the lack of contact that we typically would have made during these fairs and B2B meetings, or their delay of 6 months or a year, will have certain effects. In this sense, COVID-19 will have more repercussions. To be frank, I do not expect a significant impact this year."

KURT underlined that no critical disruption occurred on the basis of local manufacturers regarding the supply chain during the pandemic and noted that even so, foreign suppliers were affected by the process. "I actually find it useful to divide the supply chain into two groups, as local suppliers and our foreign suppliers of parts and systems. At this point, we observe that the impact of the pandemic process has been felt to a greater extent by foreign countries. Our local companies made sacrifices and have continued their production activities. However, certain disruptions have been observed in the activities of our suppliers who ran their business locally yet imported parts from foreign countries. Still, so far, there have been no delays that have significantly affected us. The Turkish Defense Industry entered this period with the blow it had already received from its suppliers. Export restrictions are the actual reason, in other words, as we are going through a period that is shaped by political motives, which are overwhelming us. I may state that COVID-19's impact was actually less of a factor than these pre-existing factors. We have nearly 600 domestic subcontractors. We strive to support them by helping them in their payments so that they survive through this process. Subcontractors play a key role within the ecosystem of FNSS, and small-scaled companies may be influenced

severely by financial fluctuations. Therefore, we aim to support them as much as we can. If the economic difficulties continue, the payments are suspended, and new orders are not placed; if the defense industry is affected overall, the sub-industry, which is a critical part of the ecosystem, will inevitably be affected in the next six months or one year. I believe that the subcontractors will be able to survive this process if sustainability can be achieved at the level of major contractors."

**General Manager and CEO of FNSS Nail KURT: "The Defense Industry has built an ecosystem over 30-35 years, and it has achieved substantial momentum in recent years. We should maintain this."**

Nail KURT also mentioned that FNSS adopted financial measures to help protect subcontractors from the effects of the recession during the pandemic and continued, "Surely we strive to assist our stakeholders that have special demands regarding this issue. As I mentioned previously, I hope there will be no major setbacks in the defense industry in a general sense and its ecosystem so that our subcontractors can survive this process with the slightest effect. From the perspective of the Turkish defense industry, the requirements of the

Armed Forces continue. In other words, no suspension or decrease is in question here as there are active theaters of operation. There are still needs, but I do not think there are any problems on the users' side. The Presidency of Defense Industries has been supporting the projects with all its power. At this point, cash flow is quite critical in an economic aspect. Where to transfer the funds or how to cut the funds is a matter of choice. As employees of the defense industry, we state that there is an ecosystem that was built over a period of 30-35 years, and this ecosystem has gained significant momentum in recent years. We should not lose this momentum as having to regain our footing, to tread forward, and gain traction again would be quite difficult. It would also be very costly. Measures to maintain the sustainability of this ecosystem must be taken. Shrinkage, recession, constriction, which

would cause downsizing in the sector, may also generate quite serious and negative consequences. These impacts can be minimized by ensuring there is continuity in our projects and by funding the projects."

**Nail KURT: "Ensuring the continuity of local programs is possible despite economic difficulties."**

KURT emphasized the fact that an economic recession might be felt in the aviation sector to a certain extent as a natural outcome of the pandemic period and noted that it was possible to maintain the continuity of local projects despite the economic difficulties. KURT: "Too much effort is being exerted in local projects to finalize the programs. Yet, with projects abroad, export activities play a major role in our business. Presently, there are cuts in the budgets of foreign countries. There may be a

reduction, particularly in the defense systems to be imported. And this may create substantial effects, especially in civil aviation as well. Our companies, such as Turkish Aerospace (TUSAŞ) and TEI, have materials and products that are included in their export items. I do not clearly know their condition. A recession may occur as a natural consequence of this process, but I do not know how to overcome this as it does not fall under my specialization. Then again, it is still possible to ensure continuity in domestic projects despite the economic difficulties. As a matter of fact, we went through such difficulties before, the ACV project was in full flow, and a substantial amount of payments were delayed while deliveries still continued during the economic crisis at the beginning of the 90s. The government found a way out, the treasury stood as a guarantor, and we floated a loan. Hand in hand, the

state, and the private sector maintained the continuity of the project throughout the period of one and a half years without any disruptions in the delivery or production. Surely, the number of such great projects was limited in those days; today hundreds of critical projects are carried out by the SSB, simultaneously. Therefore, such a solution may not be introduced these days easily. The potential suspension in payments stands out as the greatest threat at this point. This problem must be solved. Otherwise, the economic recession will be inevitable. Without a doubt, we absolutely do not wish to experience any of these repercussions. Users have certain demands and requirements, and with respect to the economy, the global impact of this process would naturally be felt in our country. Certain measures need to be adopted to minimize this and to provide relief to companies. Other than



that, new projects should not be put-off, because when a pause is made, one may not project the next year very clearly. In this sense, our expectation from our government is the adoption of measures that will maintain sustainability. Regarding exports, this needs to be evaluated within the dynamics of each company and each market. We have this misfortune regarding exports; oil revenues are of major importance for our customers in general. Since the oil prices fell by half, we expect a delay in these projects as well. We were expecting major projects this year and for the next year, and now we project postponements in them. It is true that there has been a recovery in oil prices but now we are speaking of US\$ 30 while we spoke of US\$ 60 six months ago. We need to figure out how the budgets will be affected by this adverse change.”

**FNSS General Manager and CEO Nail KURT: “Our military operations in Syria and Libya did not serve the purpose of many countries in the West in particular. They put pressure on export licenses. They aim to play their last card.”**

Noting that international relations was another key factor that impacted export activities, Nail KURT noted that especially the recent military operations in Syria and Libya did not serve the purposes of

many Western countries and that they were feeling the impact of this development in terms of export licenses. KURT: “International relations are another factor shaping export activities. Our recent military operations first in Syria and then in Libya did not gain recognition for many countries in the West. They are overstraining us with respect to export licenses. They wish to play their trump card. However, we have experienced this problem before, and sometimes it becomes an unforeseen advantage. The issue of indigenization rapidly comes up on the agenda, but without a doubt, these are problems that could not be solved in just a couple of months. Even so, in a general sense, if we tackle this issue within the context of the pandemic, there may be a bottleneck and a decline in exports in the short term. This decline can be observed in the figures declared by the Defense and Aerospace Industry Exporters’ Association at the beginning of the year.”

Speaking on the topic of the global tendency towards shifting defense expenses to the healthcare sector following the COVID-19 pandemic, KURT informed the participants on their plans for the aftermath, in 2020-2021 regarding the changes that may emerge in the defense industries of countries such as Malaysia, Indonesia, and Oman who are becoming home countries for FNSS. “We have plans in this region, but plans alone, we are not enough; we also

need to take action. FNSS has crucial projects that have been continuing for 3-4 years, and these are still not concluded. We never gave up on them, and there are no indications of their cancellation, and for these, we anticipate delays of 4-5 months. There are no changes in our medium- and long-term plans and projects. We have been working fervently on certain projects in addition to the ongoing projects in Oman. As the AV8 project in Malaysia took a lot of time and furthermore due to the COVID-19 pandemic, there may be a delay in new projects, but this does not imply that there will be no new projects. We are pursuing 3-4 new projects which particularly involve after-sales support, renovation, and the time for modernization of ACVs is coming up. Therefore, our export plans continue in Malaysia, Indonesia, and Oman. Hopefully, we also expect to receive a greater order from Indonesia in the 1-to-2-year-period ahead. Our business development project that is under the tender process in South Korea continues, and we are hopeful about it. With respect to new markets, we have certain initiatives in South America. We have developed contacts with 1-2 countries among the Turkic Republics. As I mentioned before, there may be certain postponements in the short term, and it is quite natural, but we do not anticipate a decrease or a contraction in our export plans in the medium and long term.”

Nail KURT informed participants about the

latest status of FNSS’s activities in Oman and underling that customer satisfaction in Oman was at the highest level, he said “Presently, our deliveries in Oman are being carried out, and only the delivery of the final batch of vehicles is left. Final acceptance tests in Oman will be completed, and we already have resident teams there. Our customers in Oman are extremely satisfied; by the way, we have a substantial offset commitment. We are planning this in a way to create the maximum advantage for Oman and to elevate FNSS’s leverage in new projects to the highest level. We are conducting negotiations for a project, and surely these negotiations are being held as business correspondence due to the pandemic. Still, we will make an official visit Oman for a face-to-face B2B meeting at the earliest opportunity. The establishment of a facility in Oman and the launch of new projects are on the agenda. But Oman’s Sultan, who was the leader of Oman for many years, has passed away, and a traumatic period followed this loss. Now a new Sultan has sworn in a new leader, and after these crucial changes, the oil crisis has emerged. Crucial incidents occurred in Oman prior to the COVID-19 pandemic that escalated the crisis in the country. Nevertheless, I believe that the effects of the pandemic, particularly over state matters and the defense industry, can be minimized in 2 to 3 months, and our activities will lead to a pre-pandemic recovery.

**KURT: “Turkey, acquiring know-how from Hyundai Rotem as part of the development stage of Altay MBT, will now provide the know-how to South Korea.”**

KURT stressed that, with the assistance of the business models constituted in Indonesia and Malaysia, FNSS had uplifted its reputation to an extremely high level in this region, and the company wishes to carry their partnerships in this region to more advanced stages to make their mark on new achievements. KURT: “We have two proven successful business partnerships in Malaysia and Indonesia. Of course, this development

served as a model for other companies as well. Hopefully, we will be taking the partnership in that region to more advanced stages and embracing new achievements. We accomplished a new partnership through a project-based model with the Hyundai Rotem company in South Korea, and this partnership comprises technology transfer. I am not capable of giving detailed information as the tender process is ongoing. In respect to this collaboration project, we signed a cooperation agreement with the Hyundai Rotem, which also involves technology transfer. We will be transferring the know-how to South Korea. Hereby, I would like to remind you of the fact that Hyundai Rotem supported Turkey during the

development process of Altay MBT. We will be giving technological support to South Korea hopefully if we win the tender. There are regions where we have built cooperation in the industry. We also have business models where domestic companies would be able to act as Main Contractors. We are proceeding with this model, particularly in South America. This model is quite efficient, especially for countries that wish to improve their defense industries. Instead of direct sales like as major European, American, or even Russian Defense Industry companies, this model becomes a considerable marketing advantage when offering joint & local production.”

Regarding the question

requesting detailed information on the Rapid Deployable Amphibious Wet Gap Crossing System (OTTER) tender conducted with South Korea, KURT said, “They are quite sensitive about this tender process. Therefore I apologize for not being able to give details on this issue. The process is ongoing, and we made a proposal that also includes technology transfer. I am not able to express any further points. Hopefully, we project it to be completed in the first months of next year. Of course, these are only our estimations; we have not been notified of any developments by the other party. An unbelievably challenging process is being experienced. We are going through a very detailed examination in technical terms.”

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**Nail KURT:**  
**“Malaysia is interested in PARS 4X4 and EJDER YALÇIN 4X4”**

KURT replied to a question on the ongoing delivery of 257 AV-8 Armored Vehicles in the Far East in Malaysia. This export sale was Turkey's greatest export in 2011 at that time and stating that their local partner DEFTECH was proceeding with the deliveries, KURT added, “DEFTECH has been carrying out deliveries to the end-user. We have accomplished our deliveries to DEFTECH. Only the last eight recovery vehicles remain. There was a difference between the technical requirements and the specifications envisaged by the contract. Eventually, the end-user, Malaysian Land Forces, decided on a solution at the beginning of this year and notified our company of their latest decision. So, instead of the PARS 8x8 based solution, we modified another commercial vehicle according to their specifications. We will mount the equipment they requested, add ballistic protection, and deliver the vehicle. As a result, due to the delays in the decision-making process, the delivery of the eight vehicles has been extended to 2022. Besides, there are developments regarding the second phase of Tactical Wheeled Vehicles. The activities related to this project are in progress as well. Our negotiations with the Armed Forces over the configuration



PARS 4X4 Anti-Tank Vehicle

of the vehicle are being carried out together with DEFTECH. The pandemic process led to a 3-4-month delay, but we launched the negotiations. There is an interest in our PARS 4X4 vehicle and Nurol Makina's EJDER Yalçin 4x4. I have already mentioned the modernization of ACVs, also dubbed ADNAN vehicles. In this respect, an upgrade beyond Extend Service Life is in question as well. The French company, THALES, offers certain solutions in terms of electronic systems. The modernization of ADNAN ACVs is inevitable. If not this year, it will absolutely be taking place next year. They are complaining about the maintenance process, which they are in charge of; therefore, there is a view that the execution of this process by the OEMs would be better. So, our negotiations on the after-sales support of both ADNANs and 8X8s are being carried out. They are leaning towards these projects; therefore, we are observing signals that

indicate our presence in this country will continue for a long while.”

**Nail KURT: With PT PINDAD, we are conducting significant marketing activity for the KAPLAN MT with a country in Southeast Asia.”**

General Manager & CEO of FNSS Nail KURT mentioned the changes in requirements and demands in Indonesia regarding the Medium Weight Tanks with an answer to a related question and made statements on the latest status of the KAPLAN MT medium weight tank and its export to third countries via Indonesia. KURT: “KAPLAN MT is a distinctive tank in the medium weight class. This is not a brand-new concept. In fact, it is quite popular in the western world. A rather substantial project was conducted at the end of the 1980s and at the beginning of the

1990s in the United States. Quite significant activities were conducted over a light-weight concept that employed 105mm Gun, and sourcing was allocated to this end. Yet, the project was shelved when the development project of the 8x8 Stryker vehicle was initiated. And later, with the emergence of asymmetrical conflicts in the world at that time, this concept was revisited again. They prefer this concept due to the challenging environmental conditions of Indonesia, its perception of threats, and tactical requirements. Therefore, they have 90mm or 105mm guns adapted over existing vehicles. As a result, the request for a new armored vehicle weighing nearly 30 tons came up on the agenda, and the idea of a joint development project followed. Our infrastructure was already available as we had accomplished business development activities for nearly 4-5 years up until that point. Thus

we launched the joint design process, and the design activities were conducted in Turkey. They came from Indonesia and were involved in the design stage, actually, it was rather a training opportunity for them. At this point, we launched the project as a joint project of Turkey and Indonesia as the specifications of the users remained at the forefront. We transformed their criteria and specifications into a design. Another factor that facilitated our activity was the fact that they had already determined the 105mm gun and turret, and the design of the tank was shaped according to the turret. I mentioned it as it is a distinctive characteristic; it has a striking power like a Main Battle Tank as well as in the lower silhouette. Last but not least, in terms of difference is that we achieved it at one-third of the cost of the Main Battle Tank. Without a doubt, the high mobility of the tank and the low cost brought forth great advantages. Actually, we were not expecting this much interest. With PT PINDAD, we have been conducting critical marketing activities with a country in Southeast Asia. Our cooperation agreement envisages that if Indonesia has more sway in powerful political affairs, PT PINDAD will take the lead, and FNSS will take the lead in countries where Turkey has more dominant relations.”

Mentioning the new generation ACV project conducted in Indonesia as well, KURT underlined



*T-155 Self-Propelled FIRTINA Howitzer is seen crossover the river thanks to OTTER - Rapid Deployable Amphibious Wet Gap Crossing System*

that FNSS was quite active in the country and added, “With respect to the new generation ACV, we are speaking of a vehicle that weighs over 30 tons. It will feature robust ballistic protection. The 30mm Unmanned Turret is requested as part of the project. The FNSS portfolio contains these products, and we also wish to proceed with a similar product. Indonesia is a huge market; it is the

big brother of its region. With its population of 220 million people, it has a considerable role among the developing countries, and therefore it has great demands. It is a very challenging market at the same time. We have a rather favorable position in Indonesia, and we have a strong partner. When a new project emerges, it could even be a wheeled vehicle or the ACV version of a heavyweight tracked

vehicle which is currently on the agenda, and as FNSS, we are always active in such projects.”

Following his remarks on the export programs, KURT informed the members of the press in detail about domestic projects that they have executed under the coordination of the Presidency of Defense Industries (SSB) and on their development programs for the future.



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KAPLAN MT



**Nail KURT: “The CDR stage in the MAV (Marine Assault Vehicle) Program has been Accomplished. The qualification tests will be launched in the autumn.”**

Touching upon the development process of the 27 Marine Assault Vehicles, to be manufactured for the TCG Anadolu LHD, KURT underlined that the serial production process would be completed at the end of 2021 or in the beginning of 2022 and continued, “You have already seen our Marine Assault Vehicle at IDEF’19, there are no major changes from that day. We have been discussing certain issues in terms of indigenization with the Presidency of Defense Industries. Though it was not planned before, we are focusing on the utilization of indigenous components. Other than that, the vehicle is currently available for test campaigns such as FNSS’ engineering tests as well as mine and ballistic tests. Then we will launch the qualification tests with the coordination of the Presidency of Defense Industries as stipulated by the contract. The test scheduled is being discussed by the parties. The Critical Design Review (CDR) stage has recently been completed, and the qualification tests will be launched at the end of summer (2020) at full speed, and we predict that they will be completed by the middle of the following year. The



serial production will be accomplished by the end of 2021 or at the beginning of 2022, and a total of 27 vehicles will be delivered.”

Answering a question on the development of a unique engine for the Special Purpose Tactical Wheeled Armored Vehicle Project (SPTWAV) and on the local content rate in the overall the program, KURT noted that they have signed a contract to this end with TÜMOSAN and commented on the developments regarding the engine. KURT: “The engines may bear a cost that varies from 5% to 15%. When we approach it cost-wise, we need to analyze the total local content rate in the vehicles to perceive the case clearly. Though it shows an alteration from one vehicle to another, there is a local content rate that ranges from 55% to 65%. We may say it is 60% on average. This should not be perceived as the components are not being manufactured indigenously due to technical incompetence. All components are procured, where it is more feasible in economic

terms. With respect to the technology, this case can be reduced to either an engine or a higher caliber weapon. Particularly, the restrictions imposed in terms of engine licenses in the recent period have indeed been challenging for our defense industry, but it is not a process that can be accomplished in a short span of time. I’ll say it over again that in the automotive industry, the Engine is manufactured in the beginning. We are speaking of the mass production of millions of engines extending over the years. If a company designs and manufactures an engine for a vehicle of which you will be producing 100-150 annually, then bankruptcy could not be avoided as it is not feasible to do so. Therefore, it has to be considered along with the automotive industry; it should not be tackled based on a defense industry product. Surely, there are special cases of exception. There is a powerpack (engine and transmission) development project for Altay MBT. Turkey accepted the cost of

this in advance as it was perceived as a technology development project, and it was correct to do so. If we heavily invested in design and manufacture the engines for the vehicles, we would not have had made it this far, and we would have collapsed. The SPTWAV Project is a great example of this. We venture forward as FNSS since it is a source of pride for us. Currently, we are the only company that declared to utilize unique engines in land platforms. As soon as we found the opportunity, we advanced upon this by taking the risks that came along with it. TÜMOSAN was quite assertive in this field; the company had 350hp based engines. The engine emissions may have limited the production to 350hp, particularly in commercial utilization. Still, they believed that this could be boosted to 450hp and then to 550hp with certain modifications and additions and hardware and software updates for military utilization. The engine was not off-the -shell, nor was it tested or qualified.

FNSS, TÜMOSAN, and the Presidency of Defense Industries took a significant risk at this stage. We will definitely provide a solution required by the 450hp version or the specifications of the vehicle. If you ask if we have any other solutions, of course, we do. But as we have been collaborating with foreign companies building engine groups for years now, we took this risk as we believed that we owed this success to ourselves. Many people are saying that we would fail. Yet, we are insistently focusing on achieving. We must get rid of the mindset of failure and collectively support pathways for achievement. We believe we will achieve the project by searching for ways to succeed instead of losing time on negative thoughts and thus making our mark. The development activities are currently in progress. There is a proven concept, and the activities on its implementation are being carried out with practical tests. Hopefully, we will pass another milestone in the next 2-3 weeks, and we plan to reveal the 450hp prototype physically by the end of this year. The tests will probably be launched over this vehicle next year."

KURT also made statements on the 4th generation PARS Tactical Wheeled Armored Vehicle concept, which was launched in 2018 and underlined that its difference from the PARS-IIIs concept was based on the criteria set by the end-users. "The

request for payload has been increasing both in Turkey and abroad. There is pressure on the weight, and in addition, the protection levels have substantially been increased. As a result, the tonnage will increase towards 35 tons. The engine and transmission will get larger accordingly. Therefore, a more costly and heavier vehicle with greater capacity will be revealed. This surely happens in line with the requests of our customers. Protection and situational awareness will be prioritized further as well. Moreover, it will feature a weight advantage in terms of the integration of sub-systems and payloads. Hopefully, you will see the new generation PARS vehicle at IDEF 2021."

**KURT: "As part of the Anti-Tank Vehicle Project, 26 vehicles have been delivered so far."**

Stating that the deliveries were in progress within the scope of the Anti-Tank Vehicle Project, KURT relayed information on the current status of the project. "Deliveries have been launched, and a total of 26 vehicles have been delivered to date. The last two of these vehicles have been delivered equipped with the OMTAS missiles with an Anti-Tank Remote Controlled Turret (ARCT). Therefore, mounted over these vehicles, the OMTAS (Medium Range Anti-Tank Missile) developed by Roketsan also entered the inventory. We have a rapid delivery program, and we took all the measures



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*TÜMOSAN's PowerPack was displayed on FNSS Booth at IDEF'19*

to prevent it from being affected by the COVID-19 pandemic. Delivery of the Pars 4x4 Anti-Tank Vehicle, also with OMTAS turrets, will be launched towards the end of the year. The qualification tests of that vehicle have also been successfully completed except for a minor procedure. The project has been proceeding well, and the initial feedback is quite positive."

KURT also provided information on Shadow Rider (Gölge Süvari) as part of the project executed by the Presidency of Defense Industries and underlined that these vehicles could be retrofitted and get into service within a short period with very cost-effectively. KURT continued, "Shadow Rider is quite basic, but it has been customization that exceedingly serves its

purpose. In this project, we aimed to prove that a large vehicle could be transformed into an unmanned vehicle with a very simple process. It reached its goal. We know that the Armed Forces has been conducting a conceptual project in this area from the feedback received, particularly from recent military operations and from the integration of UAVs. We wanted to be involved in the business as part of heavyweight land vehicles, and we developed Shadow Rider accordingly. It is a very cost-efficient solution. First off, to render it different from a simple remote-controlled gadget, the integration of situational awareness systems was prioritized so that it will not endanger the soldiers around it. Moreover, activities

on the integration of the GPS systems for autonomous functioning are being conducted. The Presidency of Defense Industries has executed several activities, and we are waiting for the activities to determine the scope of the development project. We wish to reveal an end-product in line with the requests of our end-users instead of developing a concept by ourselves. To this end, the integration of situational awareness systems, GPS systems, and short and long-range communication systems play a key role. Otherwise, the product will not become anything but simply a huge toy. We wish to accomplish these with the Presidency of Defense Industries. It may be quite useful in terms of logistics, and if a concept is identified for mine dragging, we may be able to configure it accordingly. Furthermore, we executed substantial activity together with STM and accomplished the integration of STM's small-sized drones. We procured 30 or more M113 armored vehicles at a very low price, and they may be launched to service in no time for a very low cost. When we compare it with the cost of an armored vehicle of 20-25 tons manufactured from scratch, we have 30 manufacturable and feasible vehicles. We are capable of adapting them in a very short period of time. I believe that Shadow Rider will play a major role within the project to be launched by the Presidency of Defense Industries."



Shadow Rider Configuration of M113 was demonstrated at IDEF'19

**Nail KURT: “133 Vehicles in the first lot will be modernized as part of the ACV Modernization Program.”**

KURT shared information on the ACV Modernization project and noted that they hoped that the vehicles, except for the ones to be modernized in the first lot, would be modernized afterward. KURT continued, “Substantial improvements will be made in the vehicles in terms of capability and protection. The vision systems that will significantly increase environmental awareness will be integrated into the vehicles with the sub-systems of Aselsan. The Remote-Controlled Weapon Station, also manufactured by Aselsan, will be integrated, and the interior of the vehicle will gain considerable space. Though it is not covered

yet, hopefully, there will be a renewal in the engine and transmission. In this way, I believe the malfunctions that occurred in the last 30 years and these vehicles will once again become very reliable. There are also enhancements in ballistic protection. Moreover, the electric and electronic parts of the vehicle will be improved. These vehicles, the lifecycles of which are to be extended, are large in number, and we cannot lay them aside. They took part in the forefront in the recently conducted military operations as well because we only have ACVs as the “Armored Combat Vehicle.” Activities on the new generation vehicles are ongoing, but there is still much time ahead before their production and inclusion in the inventory. According to our estimations, nearly 2,000 vehicles will be used effectively for 15-20 years ahead. Hopefully,

this project will continue as well since there are only 133 vehicles in the first lot. In addition, the remaining ACVs in the inventory will also come up on the agenda and will be renewed. Presently we are speaking of certain vehicles without any alternatives. I do not see any correlation in terms of the technical level reached by FNSS in this case, as we are capable of designing and manufacturing more advanced vehicles. Still, from an emotional perspective, we feel as if our first child is back home. By the way, these vehicles were manufactured here, and we learned by experienced military production in the Defense Industry with these vehicles first. Therefore the emotional dimension outweighs the other aspects. We are quite pleased about it, it is very important for us and my colleagues are approaching the project with the same feelings, but when one takes

a look on a technical level, the technical properties featured in the vehicles that we will manufacture from scratch will most certainly be much better.”

KURT added that R&D activities on turret systems were also in progress and underlined that with its new generation turret systems, FNSS is maintaining marketing activities both at home and abroad “The Weapon turrets are essential parts of the vehicles. Though we do not manufacture any weapons, we are working on the weapon turrets that will be integrated and utilized. In our first ten years, TOW turrets were manufactured with imported technologies, and then we had the 25mm sharpshooter turrets. But the eventual choice of Turkey was Dragar turrets, and after the first 133 turrets were manufactured, Dragar Turrets were selected. These were manufactured by Nurol Company under license. Later, we exported the one-man 25mm Sharpshooter Turret to Malaysia, we sold one to Egypt a long while ago, and a limited number of them were sold to the Philippines. A substantial number of these turrets were exported to Malaysia, and we sold them the FNSS turrets within the second package. The improved version of the turrets is being utilized in Oman. These turrets procured by Oman are quite different from the first turrets as they contain a substantial amount of FNSS engineering. With an amazingly competitive price, ATV (Anti-Tank Vehicle) turrets were also designed, manufactured and qualified by FNSS in a way to employ both KORNET (Anti-Tank Guided Missile) and OMTAS (Medium Range Anti-Tank

Missile System). There are 12.7mm remote-controlled turrets which were used in the MAVs (ZAHA program) and sold to Oman. In terms of development activities, we worked on the 30mm two-man turret and on the unmanned version. The activities were quite advanced, as can be considered in the preliminary stages of the projects in America. Furthermore, our activities on 35mm manned and unmanned turrets are in progress. We place great importance on turrets as our customers demand them, and we are obliged to fulfill their requirements. Aselsan’s turrets were selected within the scope of the last two projects that we have signed; the Project on the Modernization of Special Purpose Tactical Wheeled Armored Vehicles and the Modernization of ACVs, and we respect that. We are capable of integrating the turrets of other companies in line with the criteria set by our customers, but we certainly prefer the utilization of our own turrets. Then again, we have a target of being active in turrets ranging from 12.7mm to 35mm as much as possible.”

In the final session of the live stream, KURT answered a question regarding the importance of the balance between exports and domestic sales. KURT underlined the requirement of a balance between export sales and domestic sales and noted that they have aimed to achieve a balance in their sales to this end over the last five years. KURT: “Speaking of the recent past, when we take a look at the last decade, export sales constituted 80% of our total sales. In

the period after 2010, it even went to 90% for two consecutive years. On account of the projects we undertook in recent years, such as the SPTWAV and ACV Modernization Projects and MAV, we will achieve a balance of 50%-50% in the next 1 to 2 years. Domestic sales will reach a level of 60%. Though the projects have a local focus, a long-term shift towards one side ranging from 70%-80% is not quite sound, in my opinion. With respect to sustainability, a company must remain at a range of 40% - 60% for a period of 5 years. Indeed, we focused mainly on export sales for a long time. Then again, when the domestic projects are launched, especially after the accomplishment of their deliveries, if no projects replacing them

are launched in foreign countries, the domestic projects tend to come to the forefront. Still, I am quite sure that once the domestic products are matured and revealed, their export sales will follow naturally. ATVs, MAVs, and SPTWAVs will be exported, and all these products will have great export potential. Therefore, I do not think that our exports will ever fall below 50%. In fact, I do not believe that our export sales will ever decline. Our achievements speak for themselves. Also, our end-users conduct our public relations activities for us in the best way as fruitful projects pave the way for their own advertisement and sales. Our export sales will continue to increase as long as we conduct successful projects in our country and abroad.” ■



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