

= Lince (tank) =

The Lince (Spanish pronunciation : [?lin?e] , meaning " Lynx ") was a Spanish development programme for a proposed main battle tank that unfolded during the late 1980s and early 1990s . The intention was to replace the M47 and M48 Patton tanks that the Spanish Army had received under the U.S. Mutual Defense Assistance Act between 1954 and 1975 , and to complement the AMX @-@ 30E tanks manufactured for the army during the 1970s . Companies from several nations , such as German Krauss @-@ Maffei , Spanish Santa Bárbara , and French GIAT , made bids for the development contract . The main priorities were mobility and firepower , with secondary priority placed on protection ; the Lince tank was to have been lighter and faster than its competitors . The vehicle 's size would also have been restricted by the Spanish rail and highway network . To achieve a sufficient level of firepower and protection , given the size requirements , the Lince was to use Rheinmetall 's 120 mm L / 44 tank @-@ gun and German composite armour from the Leopard 2A4 .

The Spanish government decided to upgrade its fleet of AMX @-@ 30Es in the late 1980s . The focus on upgrading Spain 's AMX @-@ 30E 's distracted attention from the Lince plan , which was eventually shelved in 1990 after Spain acquired a large number of M60 Patton tanks , which were no longer required by the U.S. , in accordance with the Treaty on Conventional Armed Forces in Europe . These tanks replaced the M47s and M48s , and fulfilled Spain 's need to modernize its tank forces in the short term . No prototype of the planned Lince tank was manufactured , and no announcements were made on who would receive the contract . Four years later the Spanish government procured and locally manufactured the Leopard 2 , fulfilling the long @-@ term modernisation goal established in the Lince programme .

= = Background = =

During the 1950s the Spanish Army was supplied by the United States with 552 M47 and M48 Patton tanks as a mutual defense pact against a potential Soviet invasion of Western Europe . The first tanks were delivered in 1954 , and the fleet was upgraded in the 1970s to equal the capabilities of M60 Patton tanks . Spain was , however , interested in replacing these tanks as early as the 1960s with the French AMX @-@ 30 or German Leopard 1 . Spain eventually decided to buy the French tank and by 1975 the Spanish Army had 299 AMX @-@ 30s , designated as AMX @-@ 30Es . Of these , 280 tanks were manufactured by the local company Empresa Nacional Santa Bárbara (now Santa Bárbara Sistemas) who received the AMX @-@ 30 patent from the French company GIAT . As the first batch of production of AMX @-@ 30s ended , the French Army and Santa Bárbara began a research programme for an eventual modernisation of the AMX @-@ 30 to correct deficiencies such as mechanical reliability , armor protection and the fire control system . In fielding the AMX @-@ 30E , the army found its upgraded M47s and M48s to be outdated ; its earliest M47 tank was more than 30 years old . The army required a modern tank that could complement its AMX @-@ 30Es and started looking for a replacement for its Patton fleet .

= = Bidding = =

In 1984 , the Spanish Ministry of Defense declared its intent to set aside 120 billion pesetas (1 @.@ 1 billion U.S. dollars) for a future tank program and attracted interest from five foreign companies . German company Krauss @-@ Maffei and Spanish company Santa Bárbara presented a joint bid in mid @-@ 1984 that would produce a tank based on 1970s technology . The French government proposed to cooperate with Spain in designing a tank complete with new technology ? France would later develop this programme on its own as the AMX @-@ Leclerc . However , the French admitted that there would be restrictions placed on Empresa Nacional Santa Bárbara when it came to exporting the tank . The Italian government proposed a similar deal for a cooperative tank design . The American company General Dynamics and British company Vickers offered the M1 Abrams and Valiant , respectively ; the Spanish government rejected their offers the following year

because of the low likelihood of local production and export of the tank . By late 1985 , the only offers still under consideration were those from the German @-@ Spanish collaboration and the French and Italian governments .

Krauss @-@ Maffei 's Lince bid provided the clearest technical designs . The tank would be 49 tonnes and equipped with a 120 @-@ millimeter main gun . It could fire this gun on the move and aim at targets with effectiveness in day and night operations . Fitted with a 1 @,@ 200 horsepower (890 kW) engine , the Lince could travel as fast as 70 kilometres per hour (43 mph) on the roads . Although heavily based on the Leopard 2A4 , the Lince was smaller and lighter , trading protection for mobility . Specifically , the Lince prioritised enhanced mobility over the irregular Spanish terrain . Furthermore , size restrictions were imposed because of the existing capabilities of Spain 's railroad and highway network . Although the reduced armor conflicted with the problems that the Spanish had with AMX @-@ 30E 's thin armor , the Lince used a multilayer armor similar to that of the German Leopard 2A4 , providing greater protection than standard armor for a similar weight . The protection was further enhanced by the low profile turret , again similar to that of the Leopard 2A4 .

In early 1986 , the Ministry of Defense declared that it would choose a contract within a matter of months . News sources cited said that Krauss @-@ Maffei would most likely gain the contract , although the French might get it because of past and existing French armament contracts with Spain . Apart from producing the French @-@ designed AMX @-@ 30 , the Spanish government also had a contract for Mirage F1 fighter planes and Puma utility helicopters in 1979 . In early 1987 , France again offered Spain the contract to co @-@ develop and co @-@ produce the AMX @-@ Leclerc . This time it added the lucrative term of joint export . Despite the offer and ongoing collaboration with the Italians , Spanish investment in the German @-@ Spanish Lince program grew to 200 billion pesetas (1 @.@ 8 billion dollars) . However , the Spanish government did not announce a winner for the contract . This indecision led Krauss @-@ Maffei to freeze its bid for the Lince . Krauss @-@ Maffei also cited the loss of millions of dollars because of failures on the part of Santa Bárbara Sistemas , who would manufacture the Lince .

= = Decline of the programme = =

The Spanish Ministry of Defense agreed to modernise the Army 's AMX @-@ 30Es in 1987 and allotted 16 billion pesetas (155 million dollars) to the programme . From July 1987 , the Army upgraded its entire AMX @-@ 30E fleet to EM1 and EM2 standards . This upgraded programme posed a threat to the Lince programme . Around the same time , the Spanish government expressed interest in acquiring American M60 Patton tanks that were being retired from Central Europe , in accordance with the Treaty on Conventional Armed Forces in Europe . In October and November , the Spanish government began to negotiate for 400 to 500 M60A1 and M60A3 tanks , and planned to upgrade its acquired M60A1 tanks to M60A3 standards . In December , the United States agreed to transfer 532 M60A1 and M60A3 tanks to replace Spain 's M47s and M48s . After receiving 50 of the 272 A1s , Spain cancelled procurement of these tanks and opted to receive only the 260 M60A3s . Because of the modernisation of the AMX @-@ 30 , the decision to replace older Patton tanks with the M60A3 and Krauss @-@ Maffei 's criticism of the management of the indigenous tank programme , the Lince was canceled in 1989 . Management issues in Santa Bárbara Sistemas also played a part , including yearly negative balances and the reduction of factory personnel . However , unlike the planned Lince , the M60s only satisfied Spain 's immediate need to modernise the Army 's tank fleet in the short term . They were not a long @-@ term modernisation solution as Spain 's M47s and M48s had already been upgraded to equivalents of the M60 .

As a result , Spain negotiated with Germany over the procurement and local production of a large number of Leopard 2A5s ; a Memorandum of Understanding was signed between the two in 1995 , and the Germans lent 108 Leopard 2A4s to the Spanish Army for five years starting in 1998 . In 2005 , the Spanish Ministry of Defense declared intention to buy the tanks instead of renting them . The local production terms in the Memorandum allowed Santa Bárbara Sistemas to start producing Leopard 2Es in 2003 , and the first platoon of tanks was delivered in December 2003 . In

comparison to the smaller Lince , the Leopard 2A4 weighs 55 t (61 short tons) and is powered by a 1 @, @ 500 hp (1 @, @ 100 kW) diesel engine . The greater weight of the Leopard 2A4 is due in part to its thicker armor , affording greater protection and balancing out the loss in mobility as compared to the Lince .

= = Comparison to the alternatives = =